eMARS infoAdvantage
BO XI Upgrade
Guide to Report Redevelopment

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Updated 2/12/2010

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Table of Contents

Guide to Report Redevelopment

1 – Getting Started

Introduction

Several reports were originally developed using Business Objects "Thick Client" software, referred to in this document as "Desktop Intelligence" or "DeskI". In the Business Objects XI (BO XI) environment, all reports will be developed using the functionality available through infoAdvantage. This report development environment is known as "Web Intelligence" or "WebI".

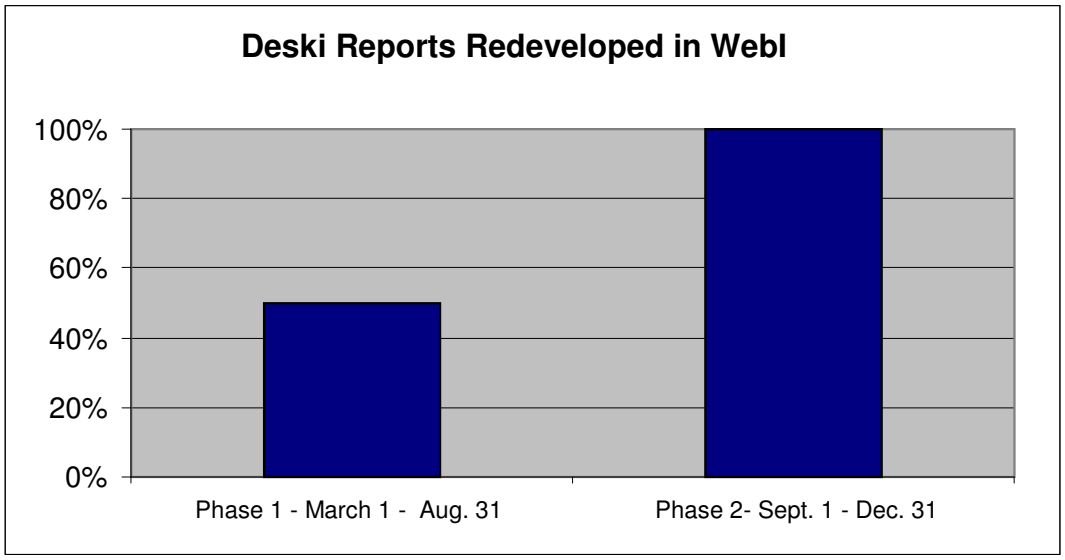
Over the next few months, needed reports that were developed using DeskI will have to be redeveloped using WebI. The purpose of this guide is to provide a framework for that development, as well as tips or tricks learned by the statewide report development team in the process of redeveloping the statewide reports.

Why Redevelop?

There are several reasons for the transition from a primarily DeskI development environment to a purely WebI development environment. Key among them is that SAP, the vendor from which all Business Objects software is obtained, has stated that DeskI will be phased out in coming releases. This is because the functionality in WebI is vastly improved in the BO XI release over what was available previously. From a hardware perspective, Web Intelligence reports require far fewer resources than Desktop Intelligence reports. Finally, eliminating the need for DeskI also eliminates licensing and maintenance fees that were associated with the additional software.

What is the Timeframe for Redevelopment?

Redevelopment will be completed in two phases (see below). The first phase begins March 1, 2010 and extends through August 31, 2010. The second phase begins September 1, 2010 and extends through December 31, 2010. You should plan to complete more than half of your reports in the first phase.



Suggested Report Redevelopment Process

Make a List of All Reports

Your department should already have a list of reports provided by the upgrade team during the upgrade process. However, you may need to update that list to include any new reports, and to exclude any reports deemed unnecessary. Don't forget to consider personal reports in your redevelopment planning.

Prioritize Reports

It is important to prioritize the reports before starting the redevelopment process. Of utmost importance is to prioritize any reports needed during closeout so that they will be completed as early in the first phase as possible. It is recommended that you plan to complete the redevelopment of reports required for closeout by June 1, 2010.

Recreate Reports

Simple reports (reports having a single Data Provider and no complex formulas or filters) should be easily recreated. Complex reports (those having multiple Data Providers and/or many complex formulas or filters) can be a bit more difficult; hence this guide. If you are in a department that has many complex reports to redevelop, it may be a good idea to set up your report developers with dual monitors, at least for the duration of the redevelopment phases. This will permit the report developer to view the DeskI report on one monitor while developing the WebI report on the second monitor.

Tips for Efficient Report Redevelopment

Document Your Reports

Documenting reports can be time-consuming, but for complex reports it may save time in the long run. Sample report documentation is provided in Appendix A. Even if your department opts not to document reports, the outline of this sample report documentation should be useful as a guide to identifying necessary report components. For example, you may not realize that a report includes a filter on a table just by looking at the report. However, if you review each item identified in the report documentation, you will not overlook the filter.

Take Steps Up Front to Ensure Report Consistency

It is highly recommended that your agency develop a template to be used for your reports, as well as a Quality Assurance checklist to help ensure consistency between reports. A sample report template is displayed in Appendix B, and a sample Quality Assurance checklist is included in Appendix C. Minimally, the report template should include a standard report title, page numbers, run date and run time. The Quality Assurance checklist should include formatting items (such as font sizes) as well as data assurance items (such as comparing totals between the original and the redeveloped report).

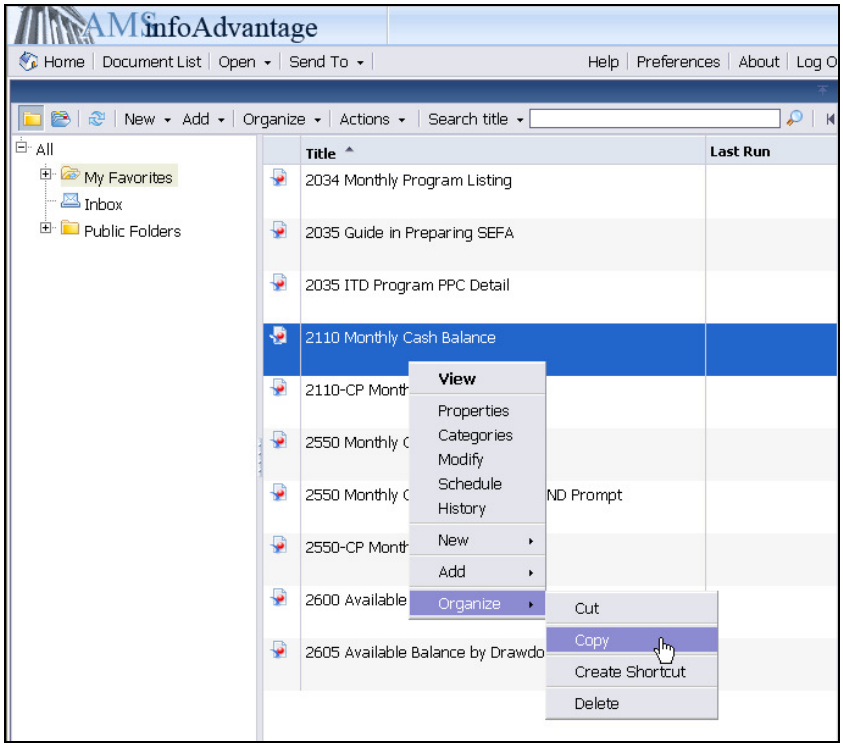
If staffing resources permit, it is recommended that someone other than the report developer conduct a Quality Assurance review of each report, comparing the redeveloped report to the original to ensure that no critical element was overlooked.

Copy Similar Reports and Modify Them

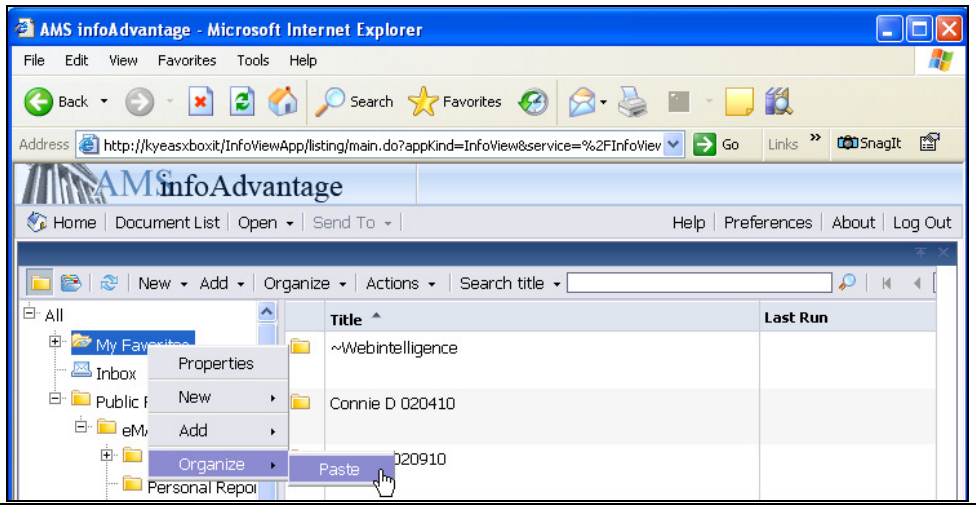
Whenever possible, it is recommended to start by copying an existing Web Intelligence report with a similar structure and modify it, rather than starting from scratch. The following steps are recommended.

1. Make a Copy of an Existing Web Intelligence Report

Open infoAdvantage and locate an existingWeb Intelligence report. Right-click on the report and choose **Organize > Copy**, as shown.



Move to the folder where you want the new report stored. Right-click on the folder name and select **Organize > Paste**. This will place a copy of the report in the folder.

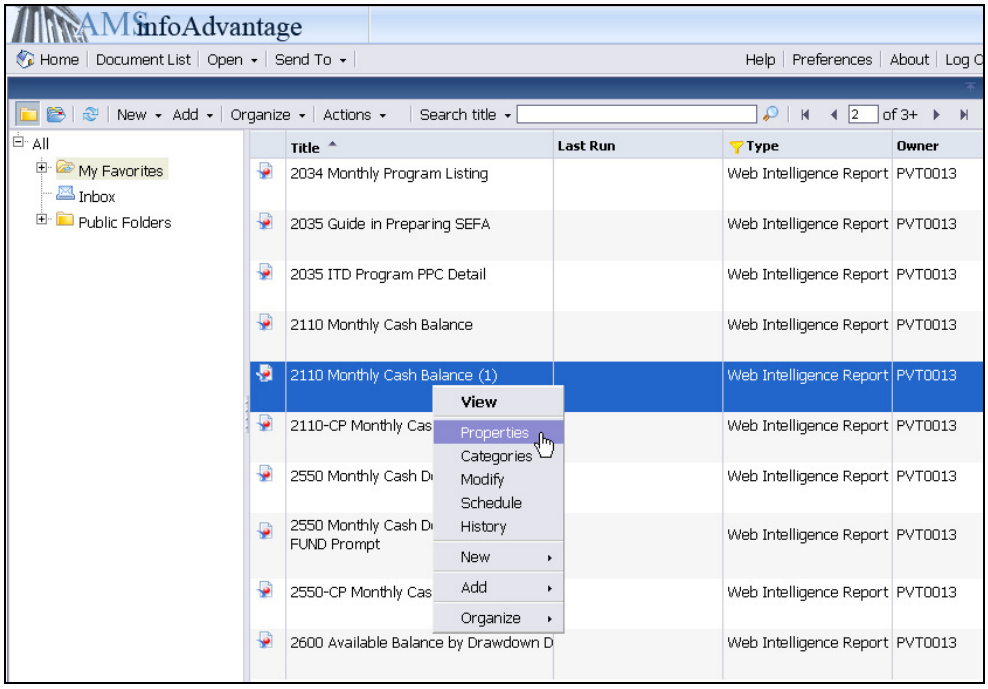


If a report with the same name already exists in the folder, the new report will be suffixed with "(1)" to distinguish it from the original report, as shown.

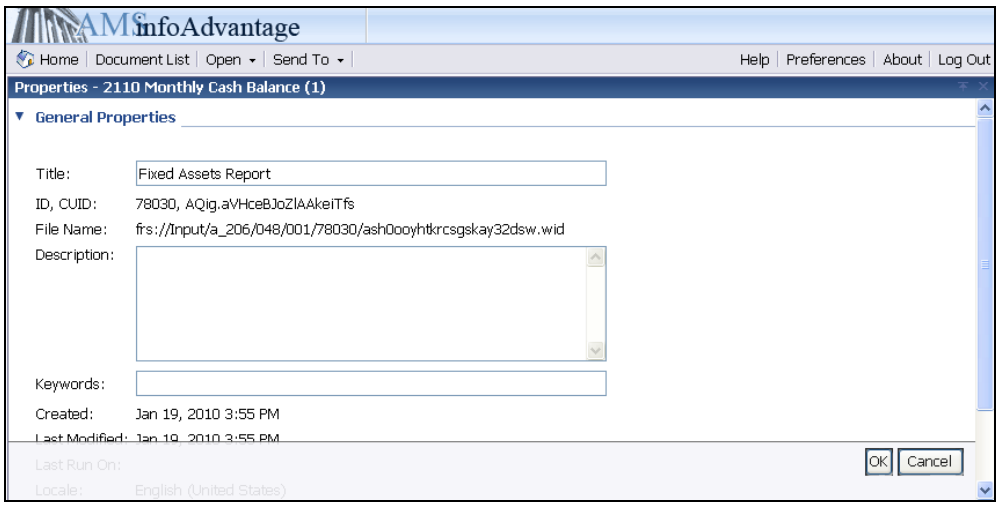
	2110 Monthly Cash Balance		Web Intelligence Report	PVT0013
	2110 Monthly Cash Balance (1)		Web Intelligence Report	PVT0013

2. Rename the Report

To rename a report, select it and right-click, then choose **Properties**.

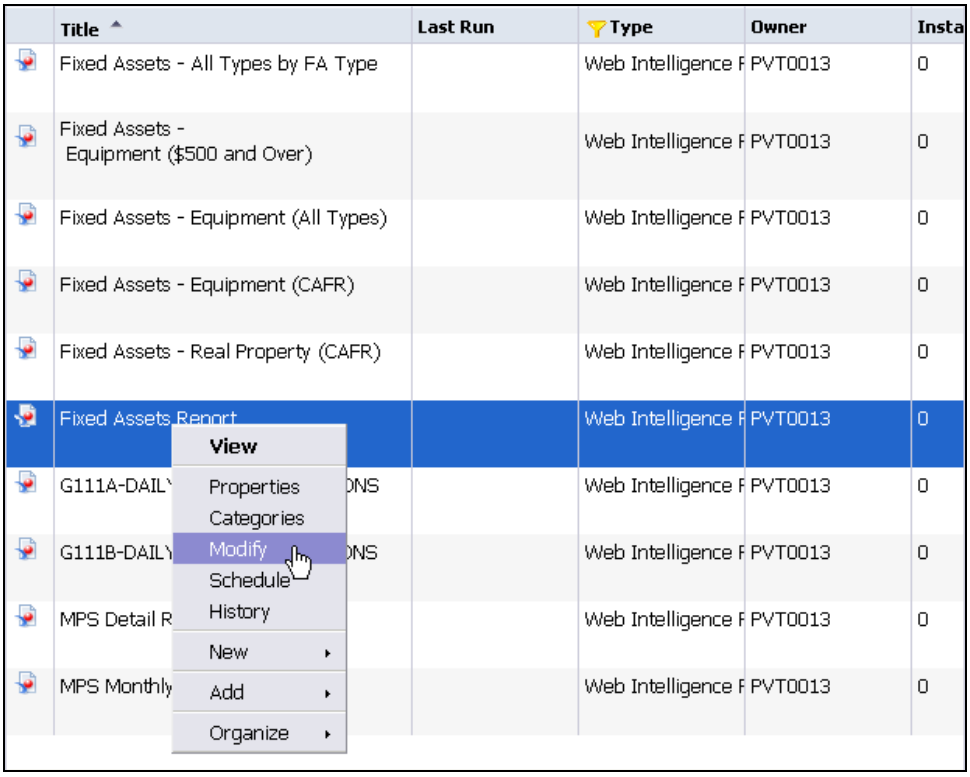


Type in the correct name for the report in the **Title:** field and click the **OK** button.

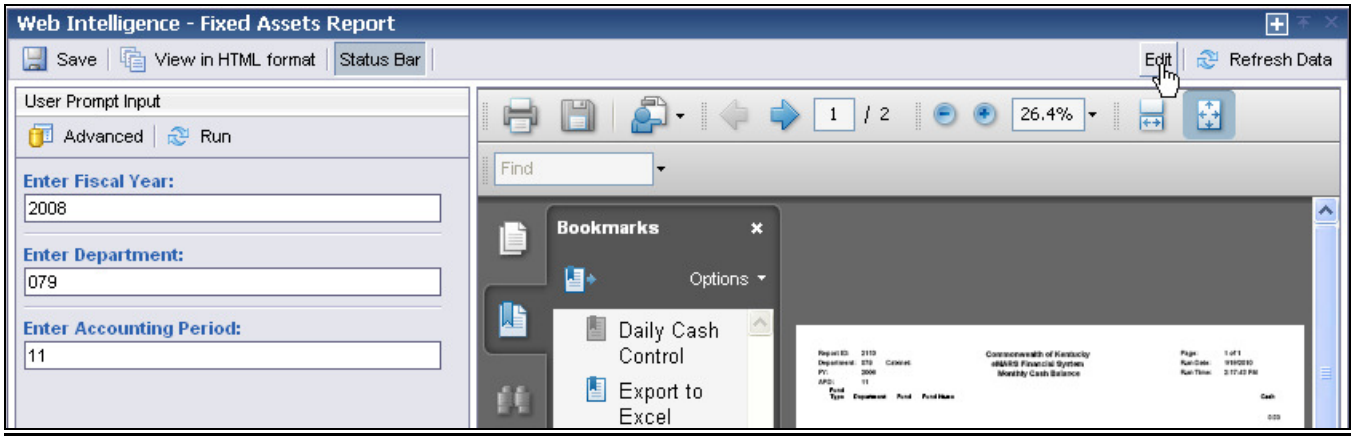


3. Modify the Report

To modify your newly renamed report, simply right-click on the report and select **Modify**. A Web Intelligence window will open displaying the report for modification.



Alternatively, you can double-click the report to open it, then click the **Edit** button at the top of the screen, as shown. This approach is not preferred because it opens the report two times.

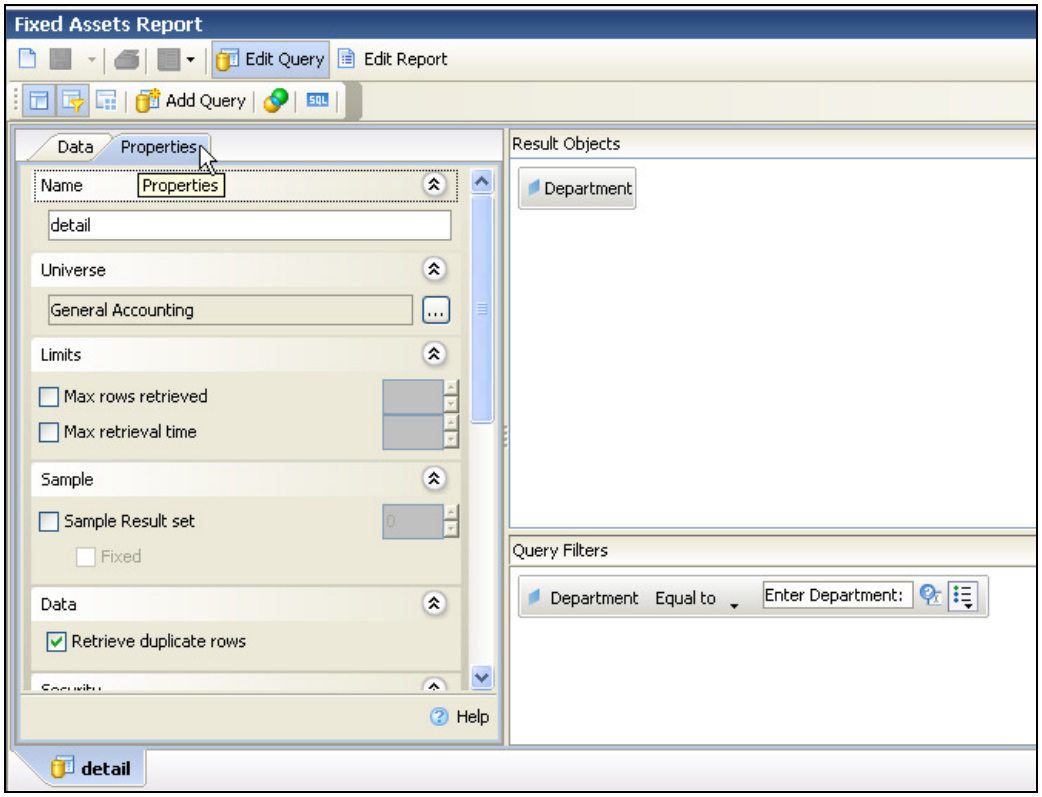


4. Change the Universe for a Query

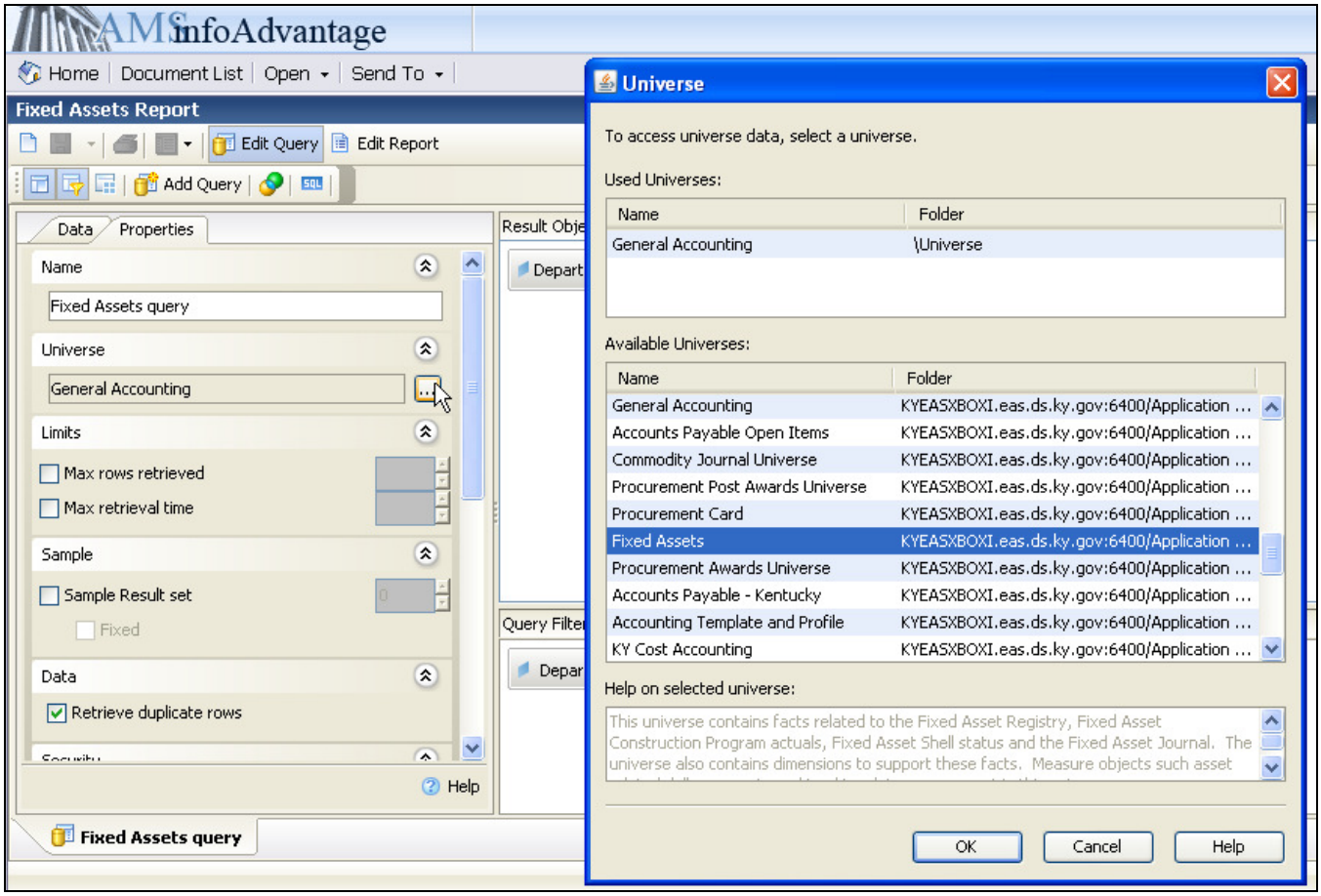
There are times when it is desirable to change the universe associated with the queries for your report. For example, suppose you are starting with a report which was built using the General Accounting Universe, but your report needs to use the Fixed Assets Universe.

Before you can change the universe for a query, you must identify at least one data object that the two universes have in common. Good candidates for this are **[Department]** or **[Posting Code]**, but any objects in common between the universes may be used. The General Accounting and Fixed Assets universes have both **[Department]** and **[Posting Code]** in common.

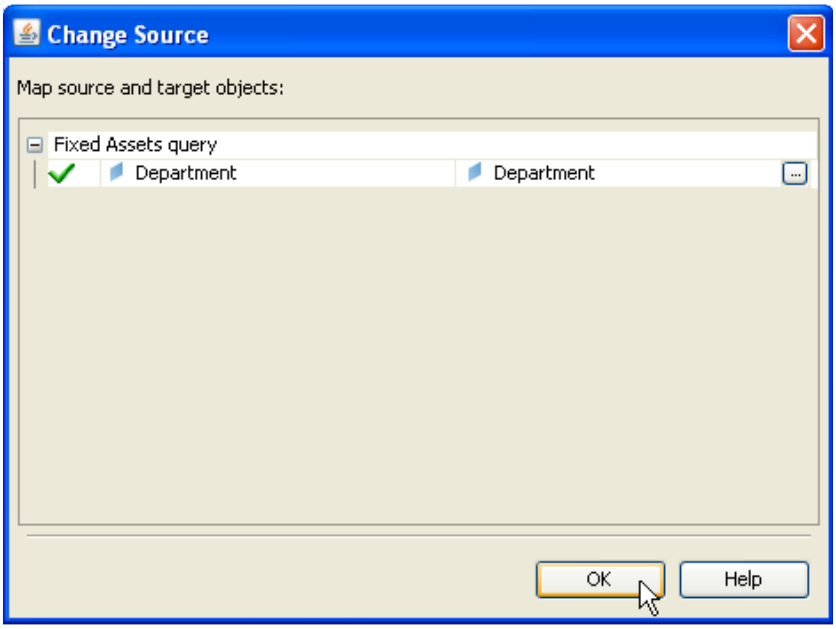
Edit your query and make sure that the common data object(s) exist in your query. Delete any extra queries, data objects or filters that are not going to be used in the new report. Select the **Properties** tab, as shown.



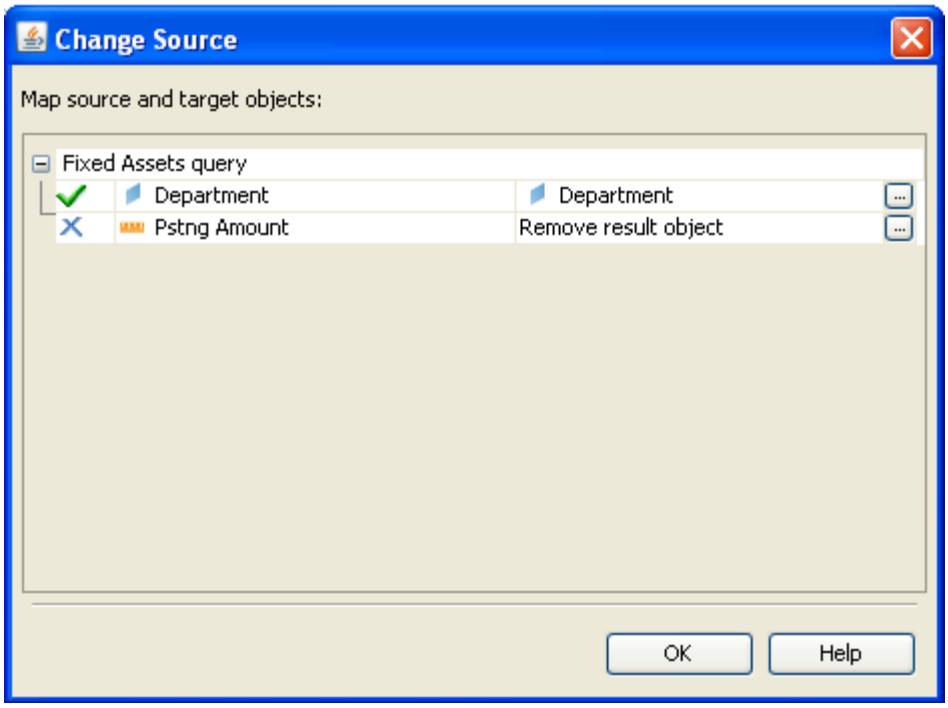
Give the query an appropriate name and click the **…** button located next to the universe name. A list of universes is displayed as shown.



Select the appropriate universe for the new report and click **OK**. The **Change Source** window is displayed. Confirm that the target object matches the source object.



If it does not, click the **…** button next to the object and select the correct target object, or use the setting to “Remove result object”, as shown.



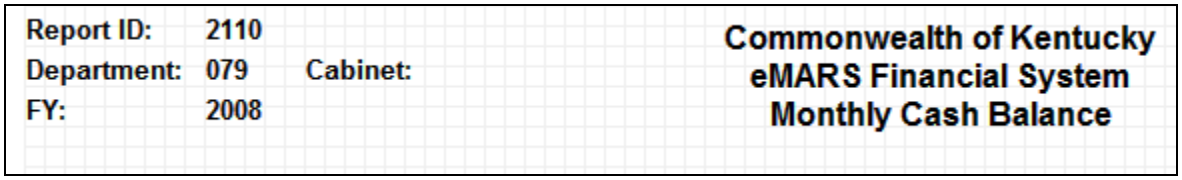
When you are done, click **OK**. The universe associated with your query will be changed.

2 – Formatting Tips and Tricks

Copy and Paste Using Ctrl-Drag-and-Drop

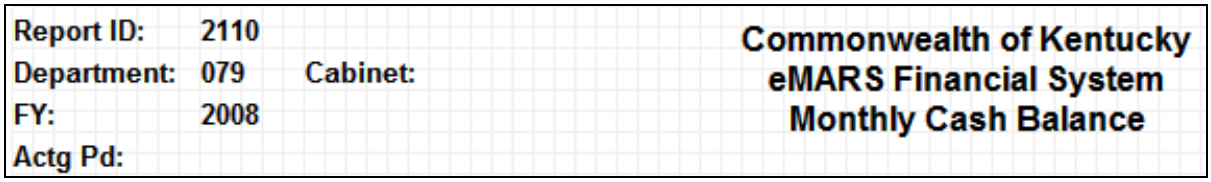
As far as formatting goes, one of the most significant improvements in the WebI development environment is the ability to select multiple cells at once for formatting or copying purposes. Simply hold down the **Ctrl** key while selecting the cells.

Another nice feature is the ability to copy and paste by holding the **Ctrl** key down while you drag and drop. For example, suppose you had a report header like the one shown, and you wanted to add an **Actg Pd:** label and field below the **FY:** label and field.



To accomplish this, select the **FY:** label, and hold the **Ctrl** key down while selecting the field containing the fiscal year. Then, with both fields selected, press and hold the **Ctrl** key down again while dragging the two cells down a bit. Instead of moving the cells, copies of them will be made.

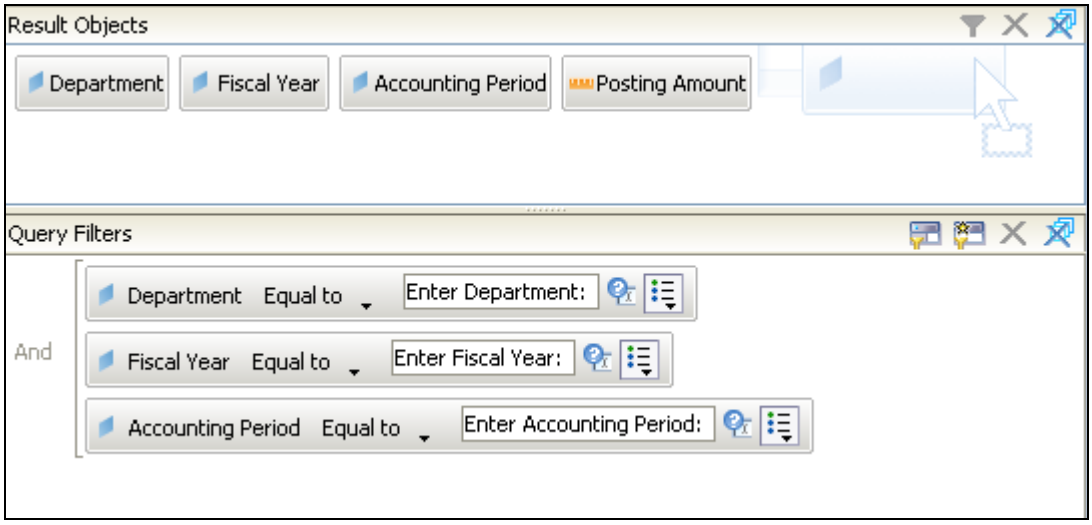
Now you can double-click each cell individually to change the label to display **Actg Pd:**, as shown.

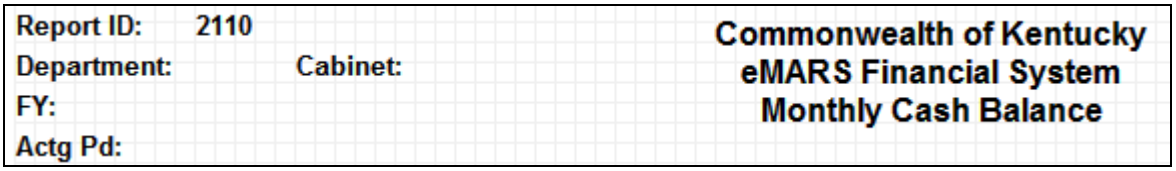


The field displaying the value needs to contain the user's response to a prompt. This is covered in the next section.

Including UserResponse Prompt Values

It is a common practice in report development to include values entered by the user in the report. For example, suppose you have a report containing prompts for Department, Fiscal Year, and Accounting Period, as shown.





To include the user's response to the prompts, you would create the following variables:

DepartmentPrompt =UserResponse ("Enter Department:")
FYPrompt = UserResponse ("Enter Fiscal Year:")
ActgPdPrompt = UserResponse ("Enter Accounting Period:")

Notice that the string provided as a parameter to the **UserResponse** function must exactly match the string included as part of the prompt filter. Spaces must be included in exactly the same places in both strings, or the variables will not display the values entered by the user.

If you had multiple queries, you may need to specify the query from which you want to display the value entered by the user. For example, in a report with **Query1** prompting for Department and **Query2** prompting for the other fields, the variables would change as follows:

DepartmentPrompt =UserResponse ([Query1];"Enter Department:")
FYPrompt = UserResponse ([Query2];"Enter Fiscal Year:")
ActgPdPrompt = UserResponse ([Query2];"Enter Accounting Period:")

Including Page Numbers

Another common practice is to include the page number and total number of pages in the report, as shown.

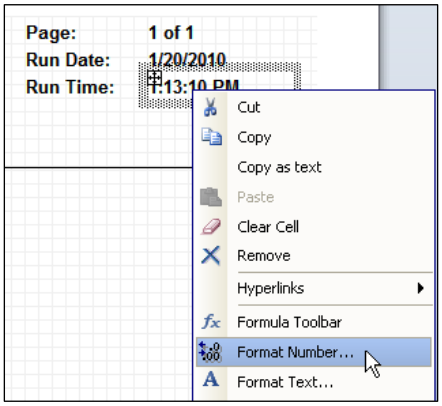
Commonwealth of Kentucky **eMARS Financial System** **Monthly Cash Balance**	**Page:** 1 of 1 **Run Date:** 1/20/2010 **Run Time:** 1:13:10 PM

The formula used to accomplish this is as follows:

Page=FormatNumber (Page();"#") + " of " + FormatNumber (NumberOfPages();"#")

Including Run Date and Run Time Values

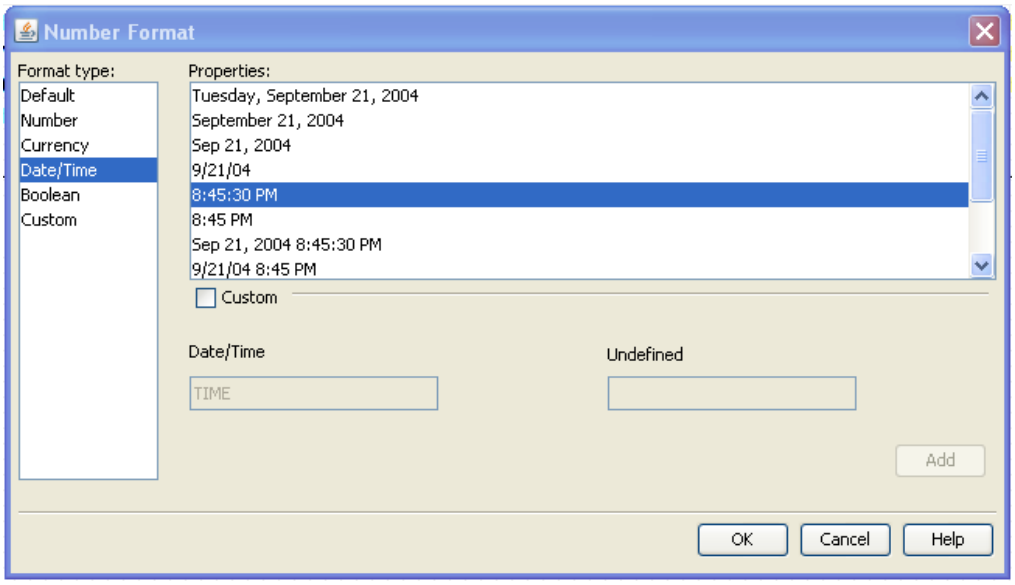
Yet another common practice is to include the run date and run time as shown above. Both of these are accomplished with the same formula (where **Query1** is the name of the query:



RunDateTime=LastExecutionDate([Query1])

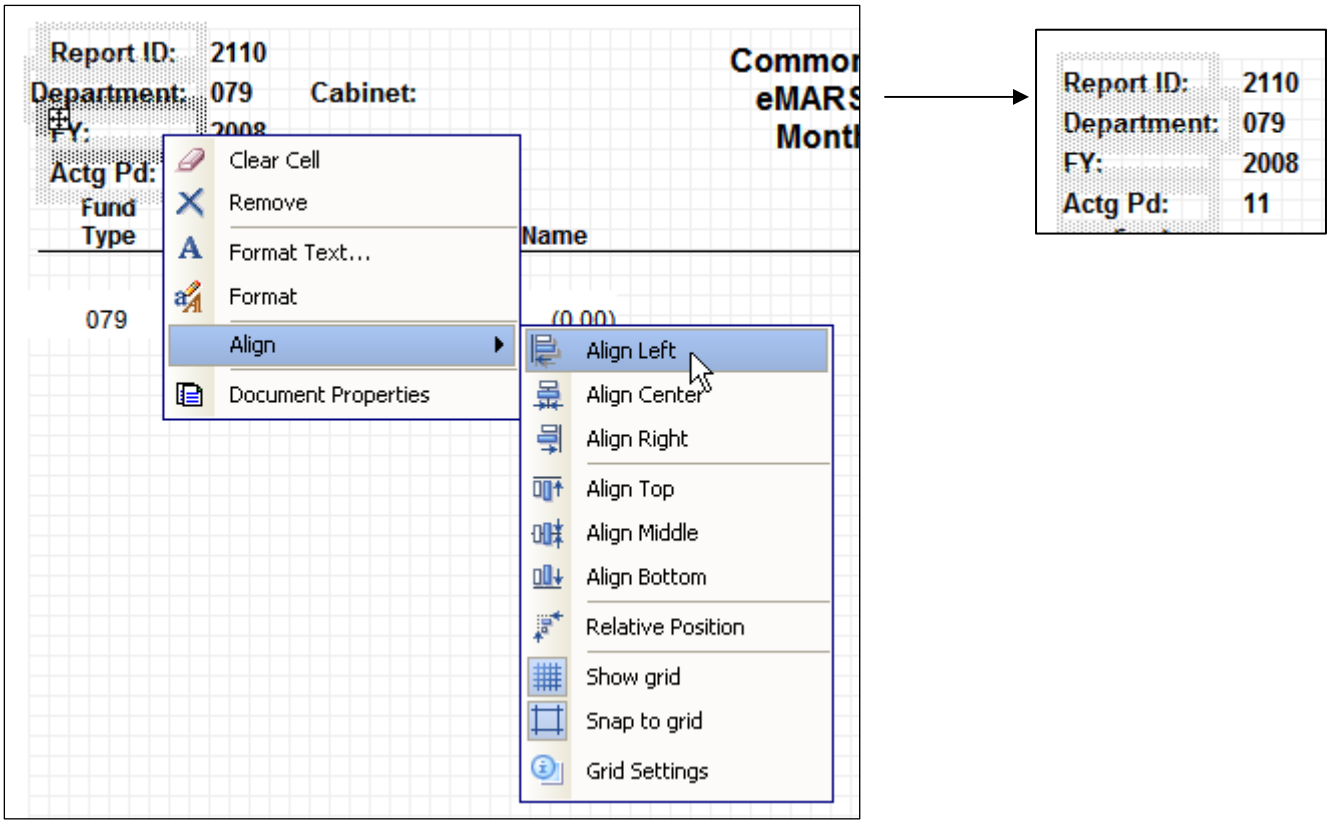
If you include this variable or formula in a cell, it will display the last run date for the report. To display the run time, you must right-click the cell and select **Format Number…**, as shown.

When the Number Format window appears, select **Date/Time** and the appropriate format for time.

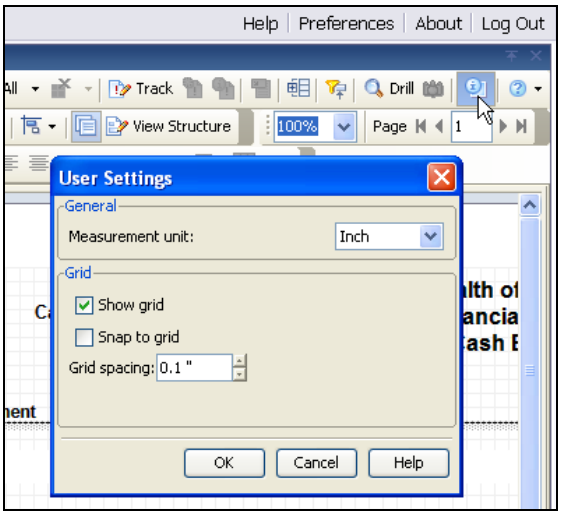


Aligning Cells

Aligning cells in Web Intelligence is now just a matter of selecting the cells, right-clicking and choosing the appropriate **Align** option, as shown.



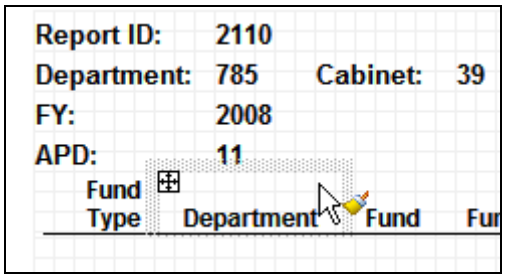
Alternatively, you may choose to use the grid to align your cells. Note the **Show grid**, **Snap to grid**, and **Grid Settings** options shown. These options may also be changed by clicking the **Show User Settings** button in the upper right corner of the report panel.



Using the Paintbrush for Formatting

A new feature in this version of Web Intelligence is the formatting paintbrush button  . This button functions in a similar way to the paintbrush button in other software applications, in that it can be used to copy the formatting of one cell to others. To use the paintbrush, select the cell with the desired formatting, then click the paintbrush. The next cell you click will be formatted using the desired formatting.

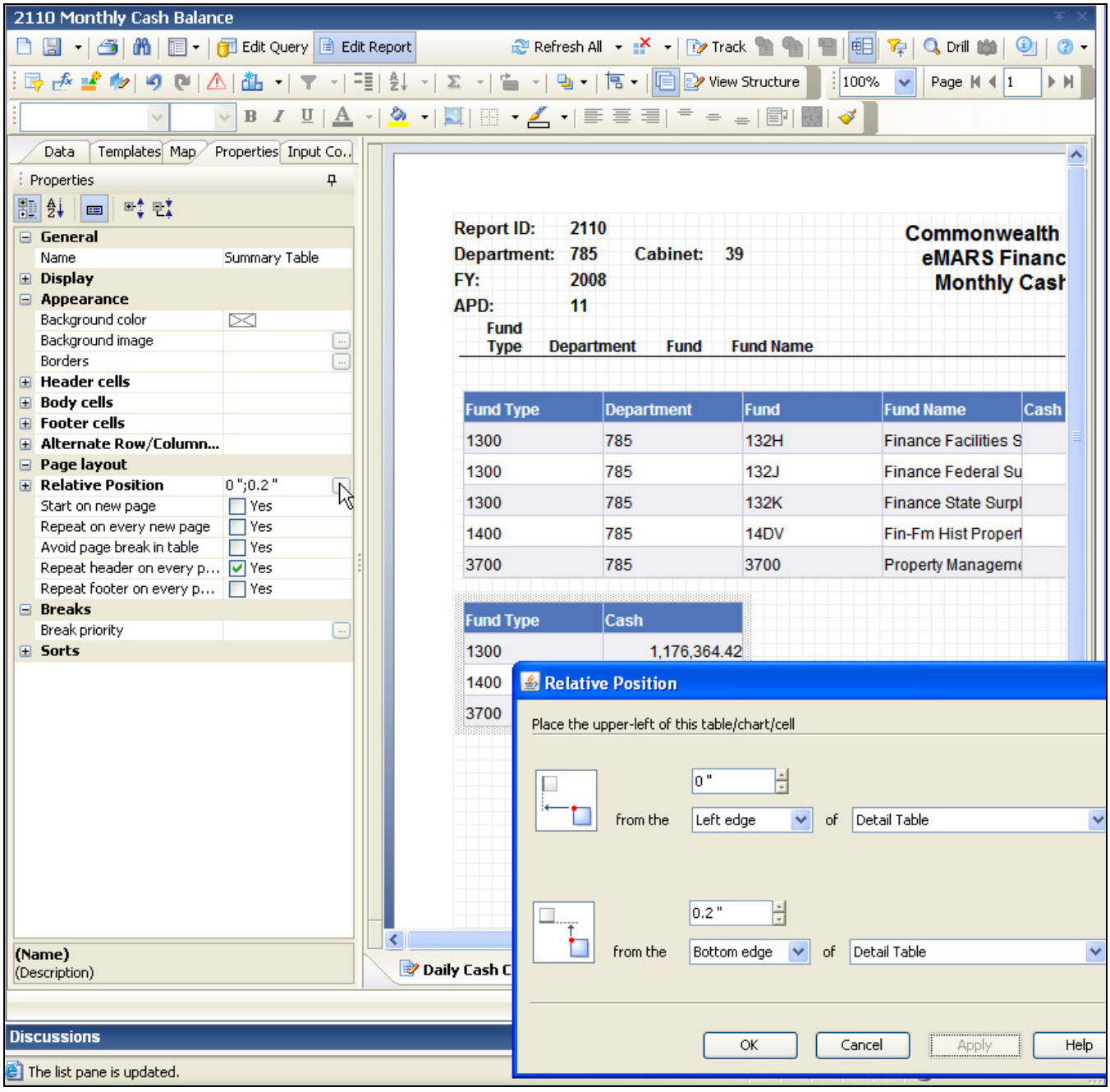
The paintbrush can be used to format multiple cells in succession. Simply select the cell with the desired formatting and ***double-***click the paintbrush button. As long as your pointer shows the paintbrush, the desired formatting will be applied to each cell you click. When you are finished, click the paintbrush button again to turn this feature off.



Using Relative Positioning

When you add objects to your report, they are given a "relative position" within the report. That is, their position in the report is defined as being a certain distance from the top of the report and a certain distance from the left side of the report.

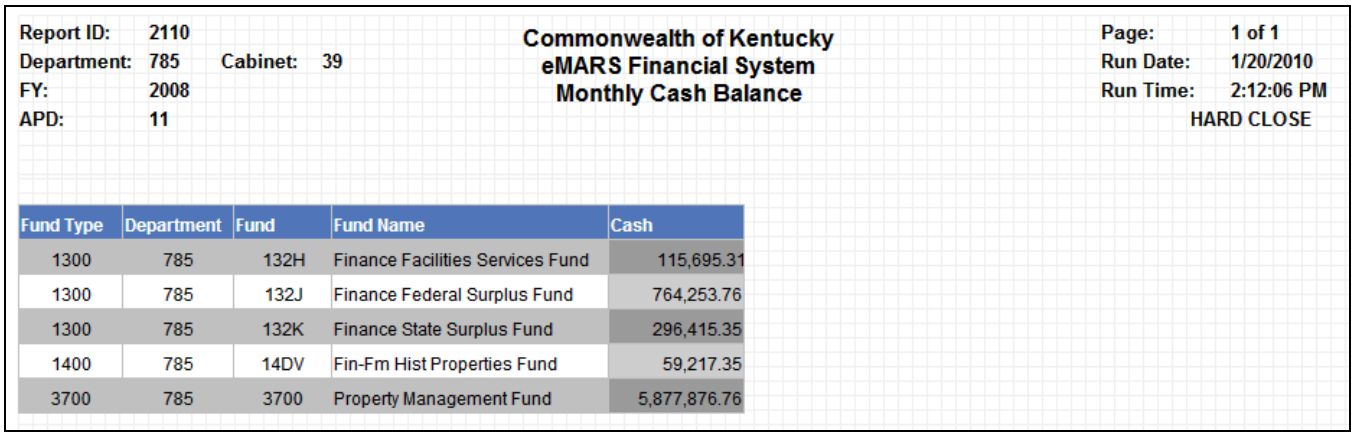
Suppose you wanted to add a second table below the first table with summary amounts by Fund Type. If you create this table without setting the relative position, and the user refreshes the report, the second table may cover up part of the first table. To avoid this, it is necessary to set to position of the second table to be relative to the bottom of the first table (rather than to the top of the report).



Now no matter how large or small the first table becomes, the summary table will always be 0.2” below the bottom edge of the detail table.

Setting the Page Layout

There are times when you would want to change the page layout for a report. For example, suppose you have a report like the one shown below.



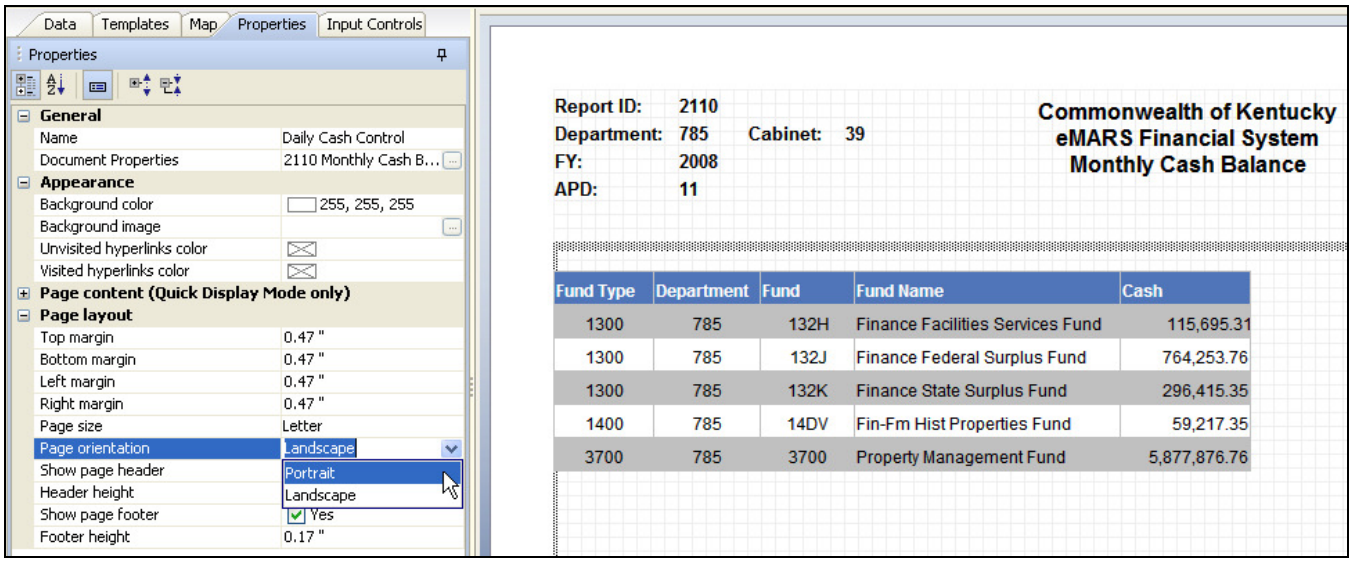
Report ID: 2110
Department: 785 Cabinet: 39
FY: 2008
APD: 11

Commonwealth of Kentucky
eMARS Financial System
Monthly Cash Balance

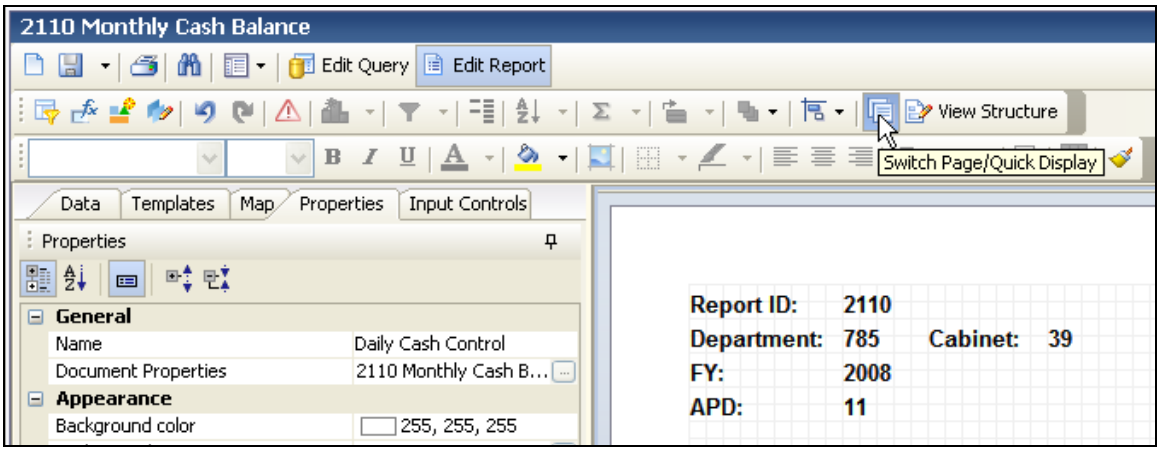
Page: 1 of 1
Run Date: 1/20/2010
Run Time: 2:12:06 PM
HARD CLOSE

Fund Type	Department	Fund	Fund Name	Cash
1300	785	132H	Finance Facilities Services Fund	115,695.31
1300	785	132J	Finance Federal Surplus Fund	764,253.76
1300	785	132K	Finance State Surplus Fund	296,415.35
1400	785	14DV	Fin-Fm Hist Properties Fund	59,217.35
3700	785	3700	Property Management Fund	5,877,876.76

This report could easily fit on a page in portrait format, but the template being used is landscape. To change the report page layout, simply click somewhere in the report (not in a cell) and choose the **Properties** tab on the left. Then expand **Page layout** and change the Page orientation, as shown.



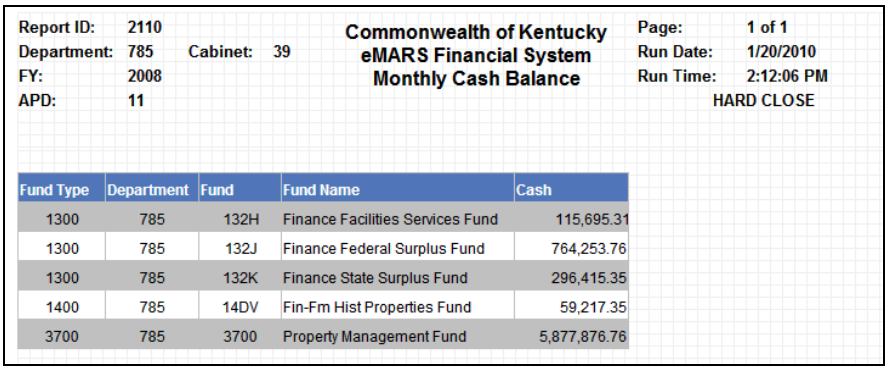
You may have to turn off the page display in order to move fields which are now beyond the right margin (by clicking the Switch Page/Quick Display button as shown below).



Formatting Headers

Now that aligning fields has been simplified, it is easier to work with header fields in the page header. Suppose you have a table as shown and you want to create labels in the page header for each column in the page header (so that they will appear on every page.

Note: This section describes the use of standalone cells for the labels in a report header, as previously described in other training manuals. An alternate approach is to drag an empty table into the report header, hide the header row, and adjust the columns to match those in the report table. This alternate approach has the advantage of allowing you to move all of the cells at once if need be. Tables can also be used for the fields displaying the Report ID, etc. This approach automatically aligns the fields, potentially saving some formatting time.



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Commonwealth of Kentucky
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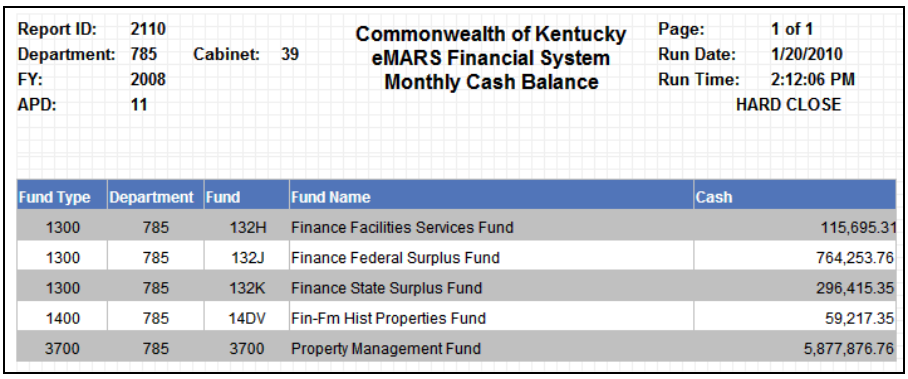
Regardless of the approach taken, the first step is to resize the columns in the table. You should spend some time to size each column appropriately before creating the header labels in the page header. This will save time later.



Report ID:	2110		Commonwealth of Kentucky eMARS Financial System Monthly Cash Balance	Page:	1 of 1
Department:	785	Cabinet: 39		Run Date:	1/20/2010
FY:	2008			Run Time:	2:12:06 PM
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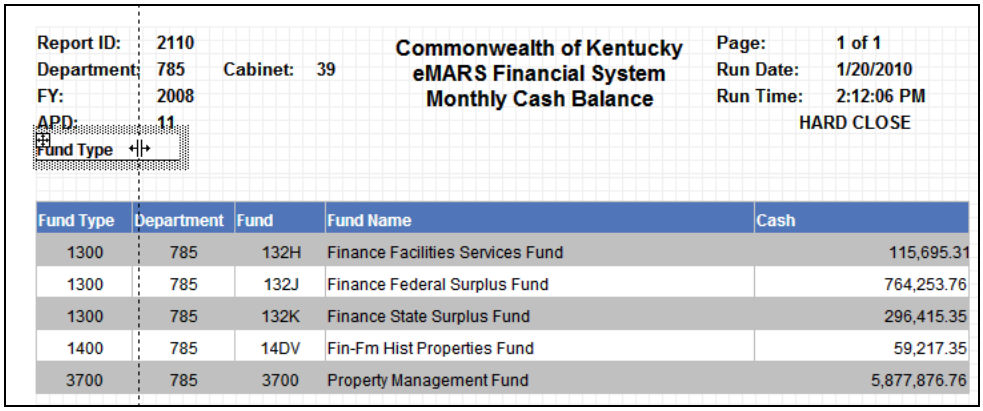
Once your column widths are set, create one header label and position it appropriately. Format it completely, with the correct font size, alignment, etc. Align the right side of the label just to the right of the first column, as shown.



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Fund Type

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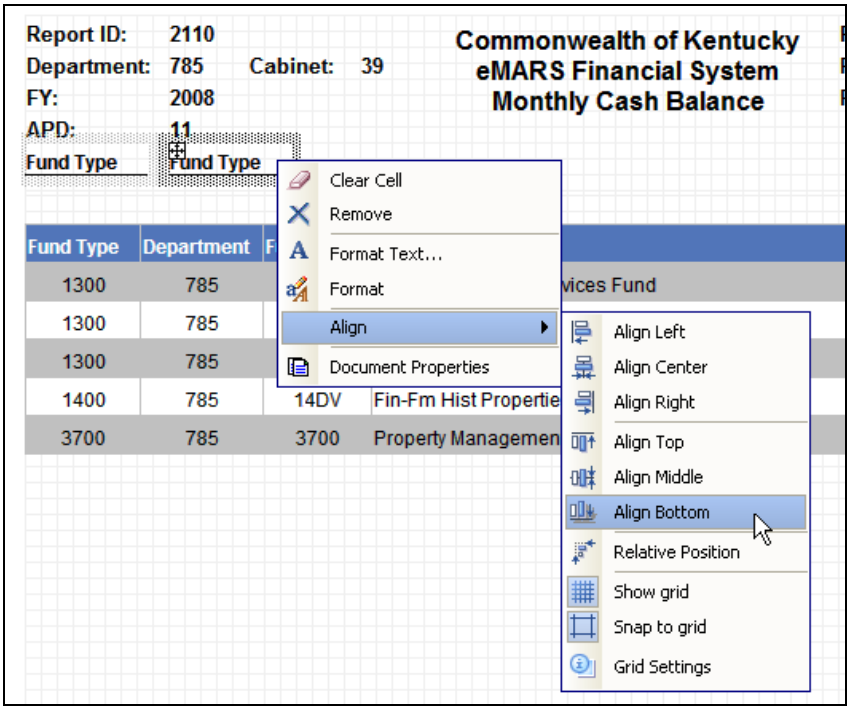
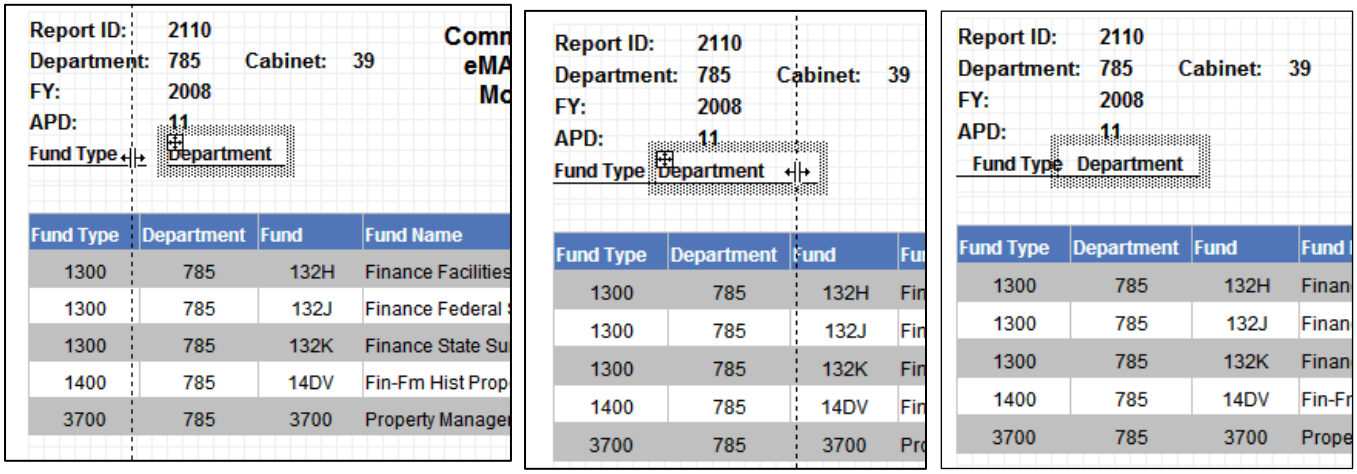
Copy the first header label (by holding down the **Ctrl** key and dragging a copy of the cell to the right). Align the two cells (by right-clicking and choosing **Align > Align bottom**).



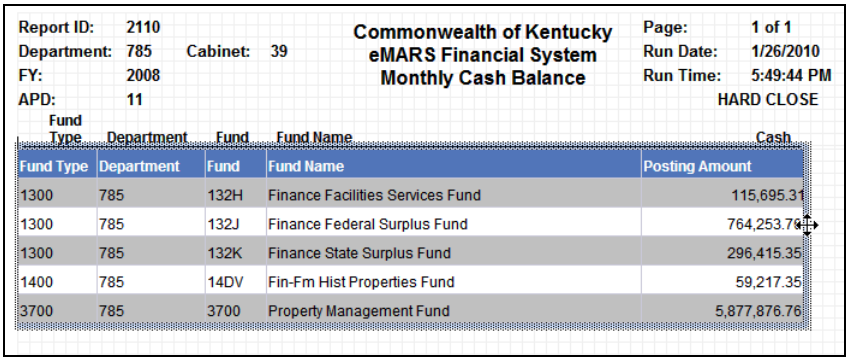
Change the label text and align the left side of the new label just to the left of the column, as shown. Then align the right side of the new label just to the right of the column.



Repeat these steps for all header labels. This process will allow you to quickly label the columns in your table with labels which will appear on every page.

Removing Formatting from Tables

Once you have your page header completed with column headers, you are ready to remove formatting from the report table. First, select the table by clicking on its outer border, as shown.



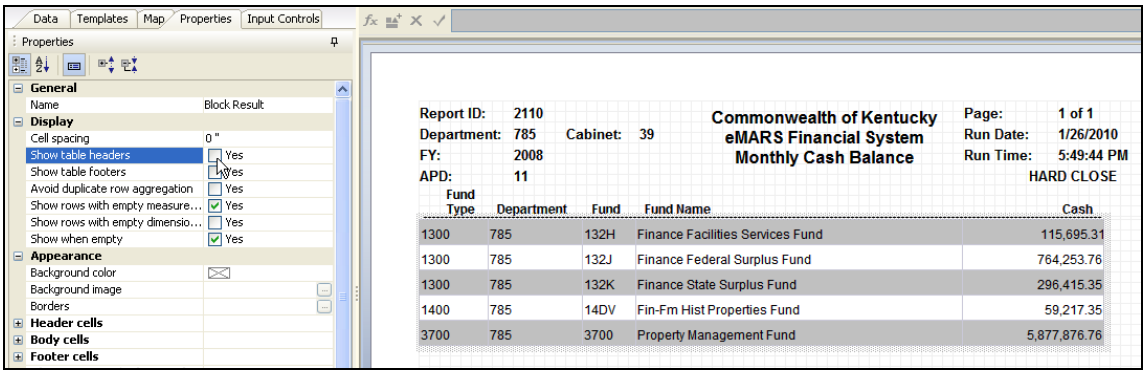
Report ID: 2110
Department: 785 Cabinet: 39
FY: 2008
APD: 11

Commonwealth of Kentucky
eMARS Financial System
Monthly Cash Balance

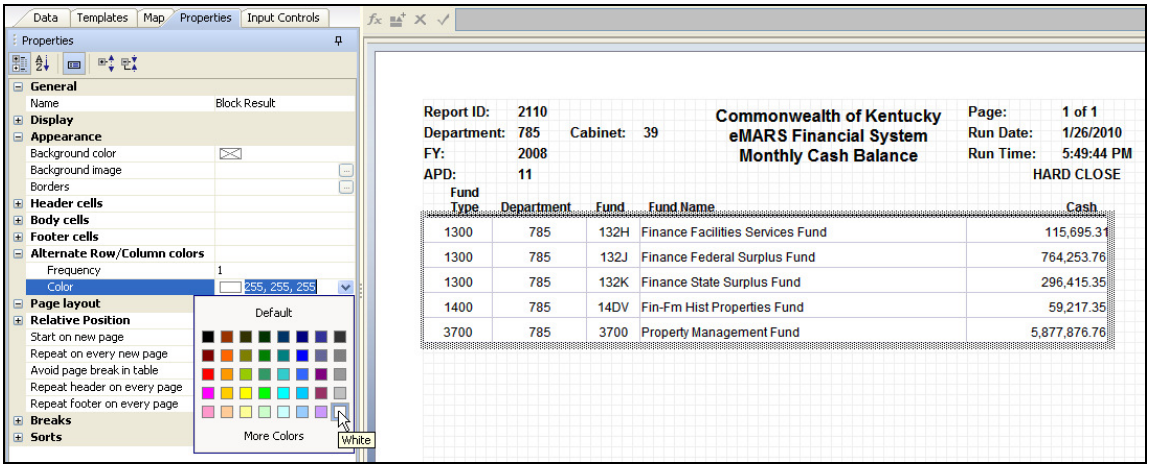
Page: 1 of 1
Run Date: 1/26/2010
Run Time: 5:49:44 PM
HARD CLOSE

Fund Type	Department	Fund	Fund Name	Posting Amount
1300	785	132H	Finance Facilities Services Fund	115,695.31
1300	785	132J	Finance Federal Surplus Fund	764,253.76
1300	785	132K	Finance State Surplus Fund	296,415.35
1400	785	14DV	Fin-Fm Hist Properties Fund	59,217.35
3700	785	3700	Property Management Fund	5,877,876.76

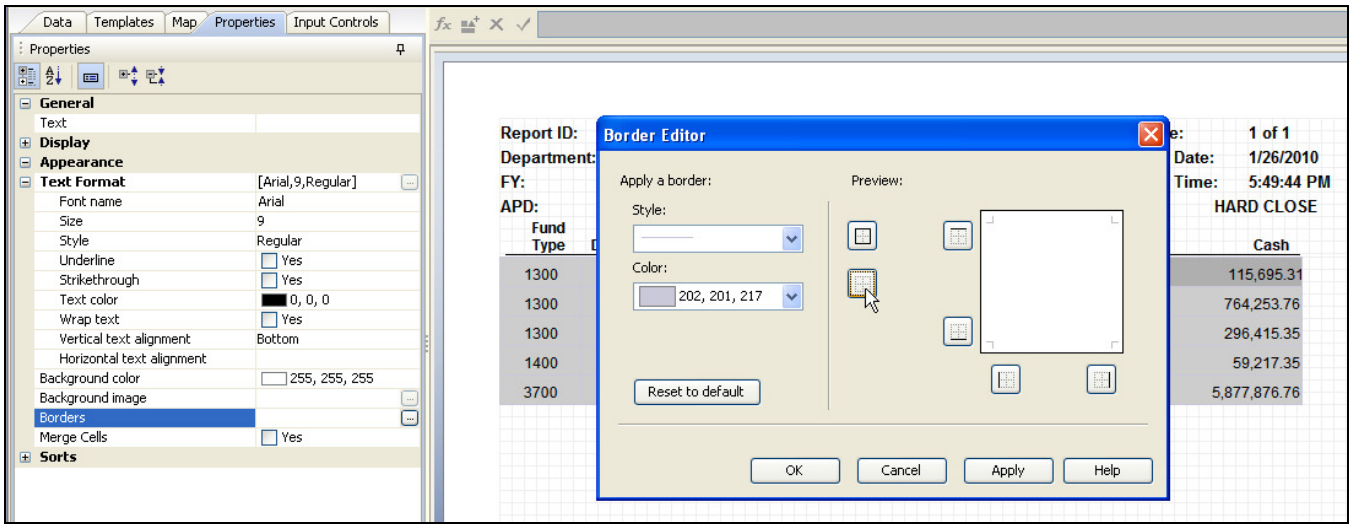
Hide the table header row by selecting the Properties tab and turning off “Show table headers” in the **Display** section.



Next, turn off the alternate row highlights by changing the frequency under **Alternate Row/Column colors** to “1” and selecting white as the color, as shown.



Now all that is left is to remove the borders from the cells. The fastest way to do this is to click on a cell in the first column, then hold down the **Shift** key while clicking a cell in the last column. This will select all of the cells in the table. Then click the small **…** button next to "Borders" in the **Text Format** section of the Properties tab. In the Border Editor window, click the button to remove all borders and then click **Apply** and **OK**. This will remove all borders from your table.

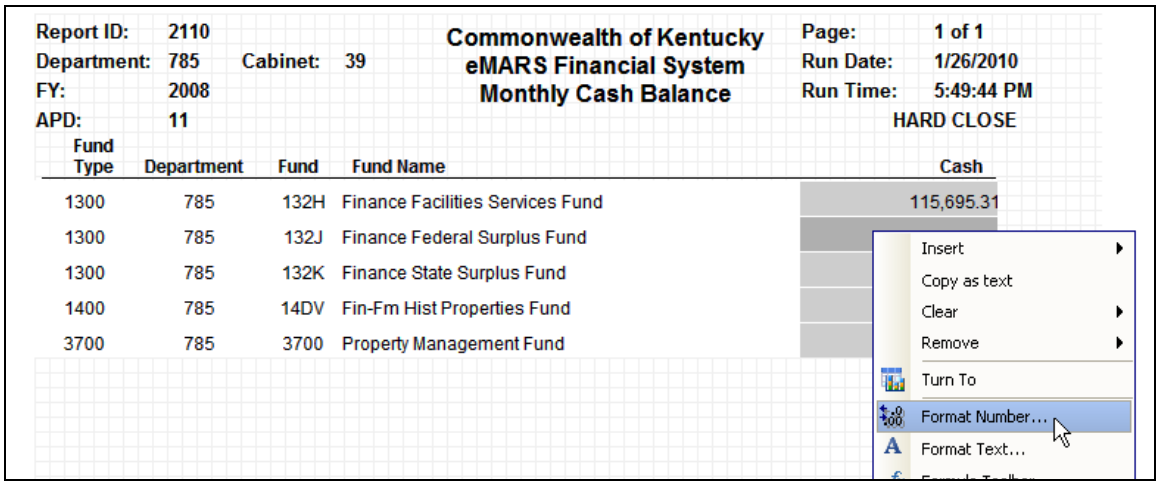


Formatting Amounts

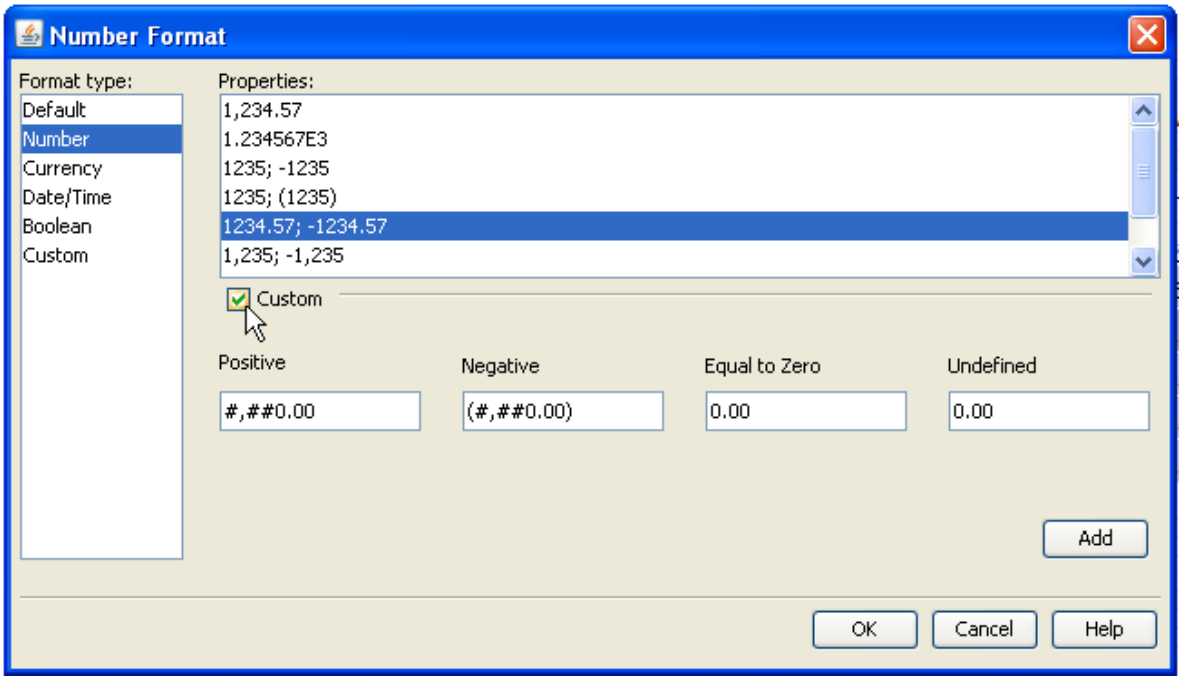
Most amount fields will default to a format which does not display two decimal places and does not use comma separators, and uses minus signs to indicate negative amounts.

Formatting Amount Cells

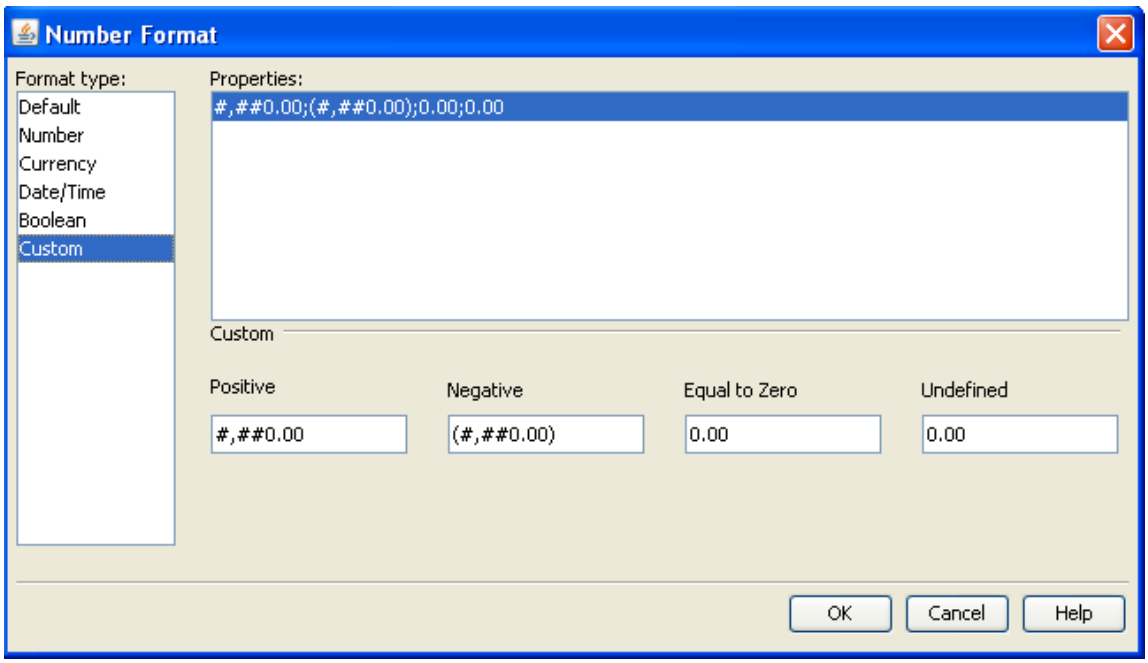
To format the amount in a cell containing only that amount (without a label), right-click on the cell and choose "Format number…"



In the Number Format window, choose “Number” as the Format Type and click the “Custom” checkbox. Then make entries in the fields as shown.



This will result in the amount field being displayed with comma separators and two decimal places, using parentheses to indicate negative amounts. Additionally, NULL values (undefined values) will be displayed as 0.00. Once this custom format is defined for an amount field, you can select it for other fields by choosing “Custom” as the Format Type and selecting the format previously defined.

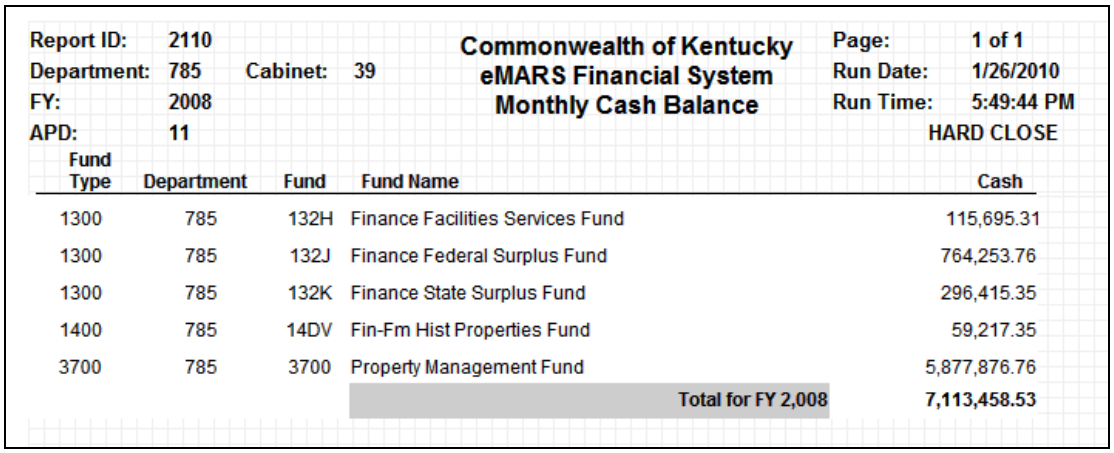


Formatting Amounts Included in a Label

Sometimes amounts are included in labels. For example, suppose you added the following label to a grand total on your report:

=“Total for FY ”+Max([Fiscal Year])

This formula is displayed in the report as shown below.



Report ID: 2110
Department: 785 Cabinet: 39
FY: 2008
APD: 11

Commonwealth of Kentucky
eMARS Financial System
Monthly Cash Balance

Page: 1 of 1
Run Date: 1/26/2010
Run Time: 5:49:44 PM
HARD CLOSE

Fund Type	Department	Fund	Fund Name	Cash
1300	785	132H	Finance Facilities Services Fund	115,695.31
1300	785	132J	Finance Federal Surplus Fund	764,253.76
1300	785	132K	Finance State Surplus Fund	296,415.35
1400	785	14DV	Fin-Fm Hist Properties Fund	59,217.35
3700	785	3700	Property Management Fund	5,877,876.76
			Total for FY 2,008	**7,113,458.53**

To remove the comma, change the formula to include the FormatNumber function, as follows:

=“Total for FY ”+FormatNumber(Max([Fiscal Year]);“####”)

The “####” indicates that the number should be displayed with no comma separator. If you desired a comma separator, you would use “#,###”.

3 – Flag Variables

When to Use

Prior to the BO XI upgrade, it was possible to include objects in your report table that were hidden. This allowed you to include those objects in **If…Then…Else** statements intended to narrow down the amounts included in a total. For example, Closing Classification was frequently used to narrow down amounts included in a total, but it was not desirable to include Closing Classification in the report table. The field was included but hidden, and failure to include the field resulted in errors. When hidden objects were used, it was common to fold the report to make it more presentable.

In BO XI, hidden objects are no longer permitted. Instead, flag variables should be used to replace the **If…Then…Else** statement with a **Where** clause when defining a measure. This makes it possible to narrow down amounts included in totals without including the unwanted field in the report table.

Setting Up the Flag Variable

It is recommended that a naming convention be adopted for flag variables. That is, a flag variable should be named using the same variable name as the measure, but with "flag" appended to the variable name. For example, if the measure being defined is called **[Measure]**, then the flag variable associated with it would be called **[Measure flag]**.

Suppose you have a measure in an existing report which was defined as follows:

[Measure] = If ([Type]=7) Then [Amount] Else 0

Prior to the BO XI upgrade, you could define a measure using this kind of **If…Then…Else** statement, but you had to include **[Type]** in your report table as a hidden field. As mentioned, in BO XI you will not be able to hide the field. Flag variables are used to get around this restriction.

The flag variable is established using the same **If…** statement, but instead of including **[Amount]** as the result, flag values are used. In our example, the flag variable would be defined as follows:

[Measure flag] = If ([Type]=7) Then "Yes" Else "No"

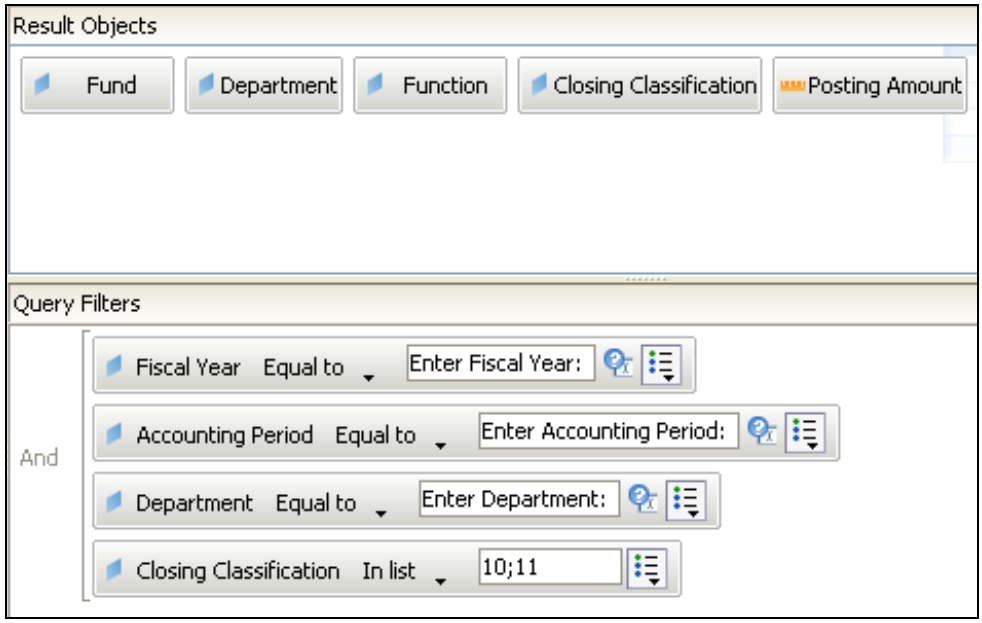
Setting Up the Measure (Where Clause)

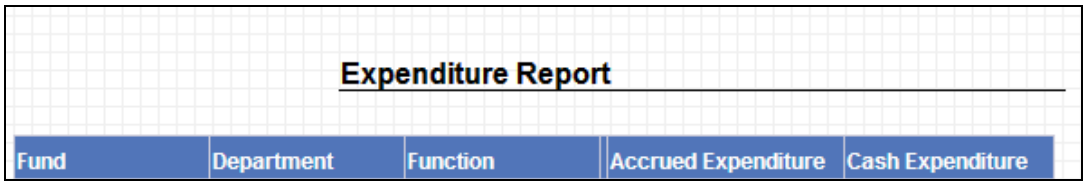
Once the flag variable has been established, the measure itself is defined using a Where clause. Basically, you are saying, "Include the amount whenever the flag is Yes". So in our example, the measure itself would be defined as follows:

[Measure] = [Amount] Where ([Measure flag] = "Yes")

Example: Accrued vs. Cash Expenditures

Prior to the BO XI upgrade, it was common in a report to pull in records for both Accrued and Cash Expenditures (Closing Classification = 10 and 11), then to narrow down amounts in separate columns using **If…Then…Else** statements to define measures. For example, a query might be defined as shown.





As you can see, records for both columns are selected by the query. Formulas and variable are then used to control which amounts are included in the sum for each column. For example, the following two variables were defined for Cash Expenditure and Accrued Expenditure:

[Cash Expenditure] = If ([Closing Classification] = "10") Then [Posting Amount] Else 0
[Accrued Expenditure] = If ([Closing Classification] = "11") Then [Posting Amount] Else 0

Since it is not desirable to include Closing Classification in the report table, when redeveloping this report the following two flag variables should be defined:

[Cash Expenditure flag] = If ([Closing Classification] = "10") Then "Yes" Else "No"
[Accrued Expenditure flag] = If ([Closing Classification]) = "11" Then "Yes" Else "No"

Then the measures, which will be included in the report, would be defined as follows:

[Cash Expenditure] = [Posting Amount] Where ([Cash Expenditure flag] = "Yes")
[Accrued Expenditure] = [Posting Amount] Where ([Accrued Expenditure flag] = "Yes")

Since Closing Classification is no longer included directly in the measure definition, it is not necessary for it to be included in the report table. Additionally, with this approach folding is no longer necessary; the amounts roll up to the correct totals automatically.

Expenditure Report

Fund	Department	Function	Accrued Expenditure	Cash Expenditure
0100	785	DFCX		-0
0100	785	DFEX	0	356,357.13
0100	785	DFHX	-139.94	14,545.42
0100	785	DFOX	-782.91	236,091.47

Notice that the first row displays no value for Accrued Expenditure. This happens when no records exist matching the condition defined in the flag variable. To address this, you can format the numbers in the columns as recommended in the later section, “Formatting Amounts” so that they display 0.00 when the amount is undefined.

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4 – Report Filters

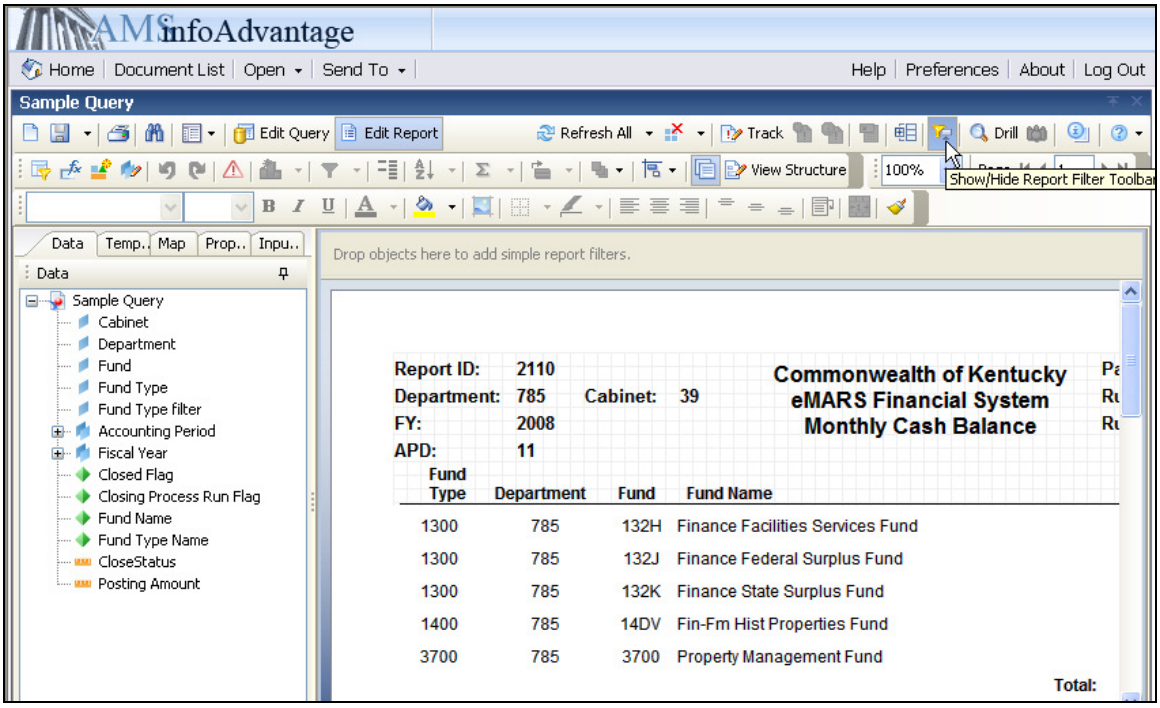
When to Use

Most of the time, query filters are used to control which data is displayed in a report. But there are occasions when you may want a report to display only part of the data retrieved by the query. For example, you may have an Inception-to-Date report that includes a report tab showing only activity for the current accounting period. Or you may have a budget report where you want to display allotment for all periods, but only for accounts having expenditure activity in the current period.

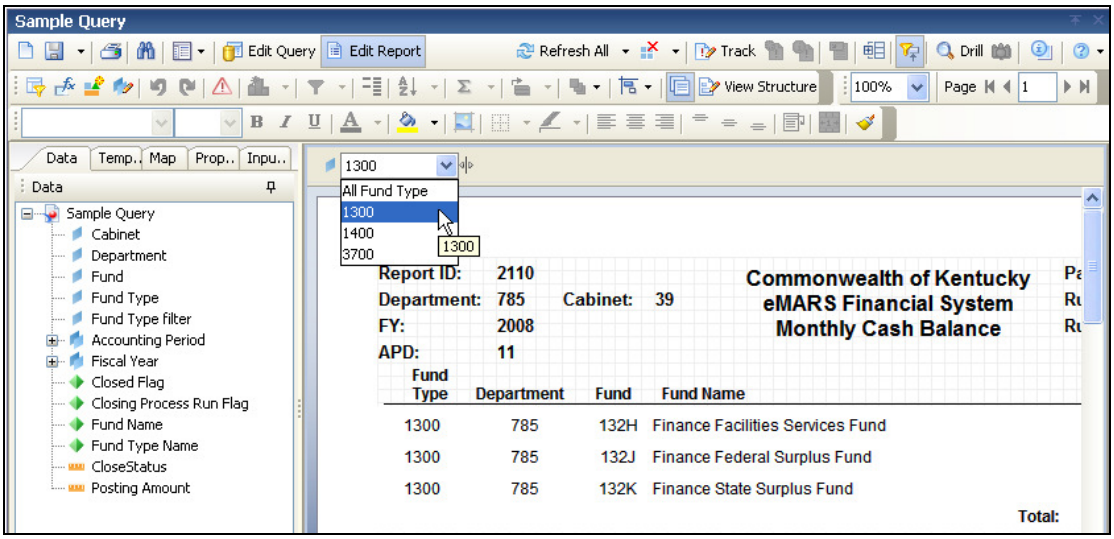
There are several ways filters can be applied to a report. In this chapter, we will review three of them: applying a simple report filter, applying a complex report filter, and using a filter variable.

Applying a Simple Report Filter

The simplest way to apply a filter to a report is to use the **Show/Hide Report Filter Toolbar** button in the toolbar near the top right of the development area. When you click the button, a panel appears along with the prompt, "Drop objects here to add simple report filters" as shown.



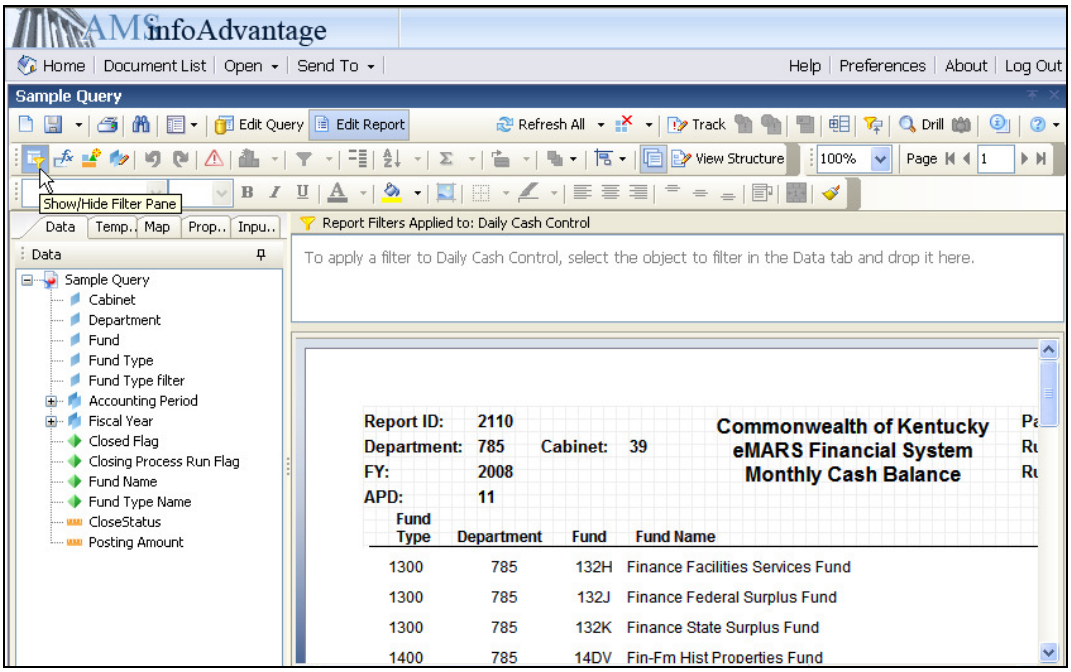
Filters are applied by dragging data objects into the filter panel. Each filter creates a dropdown box from which users can choose the value for the filter, as shown.



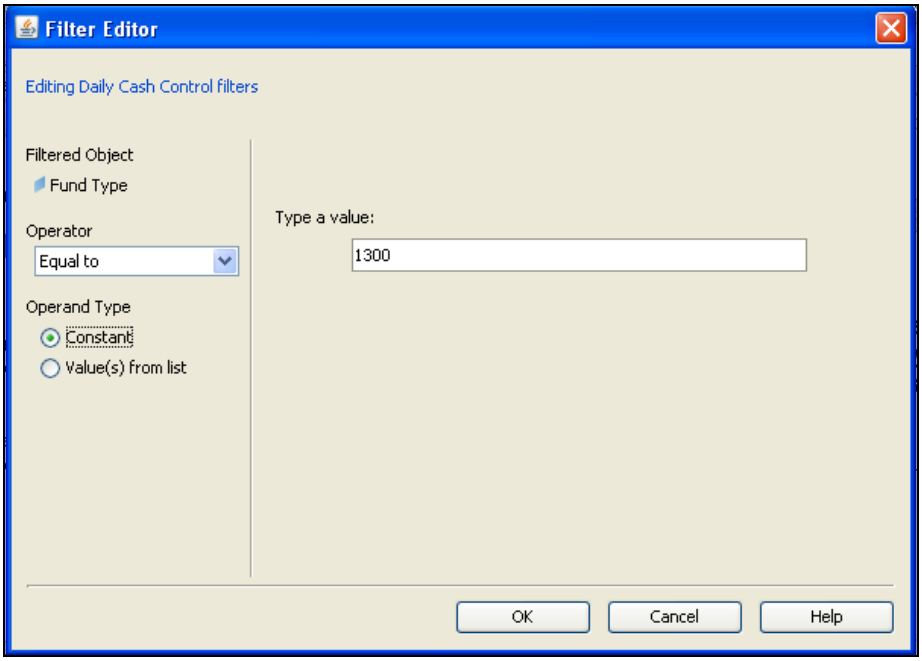
This kind of filter is very easy to apply, and flexible in that users can choose any valid value for the filter. Be aware, however, that users can also remove this kind of filter when they view the report in HTML format.

Applying a Complex Report Filter

Another way to accomplish the same result but prevent users from changing filters is to use the **Show/Hide Filter Pane** button in the toolbar at the top left of the development area. When you click this button, the filter panel is displayed, as shown.



Again, filters are applied by dragging a data object into the filter panel. With this approach, however, the Filter Editor window is displayed.



This kind of filter is more complex in that you can choose the operator and the value. Users cannot change this kind of filter once it is applied to the report.

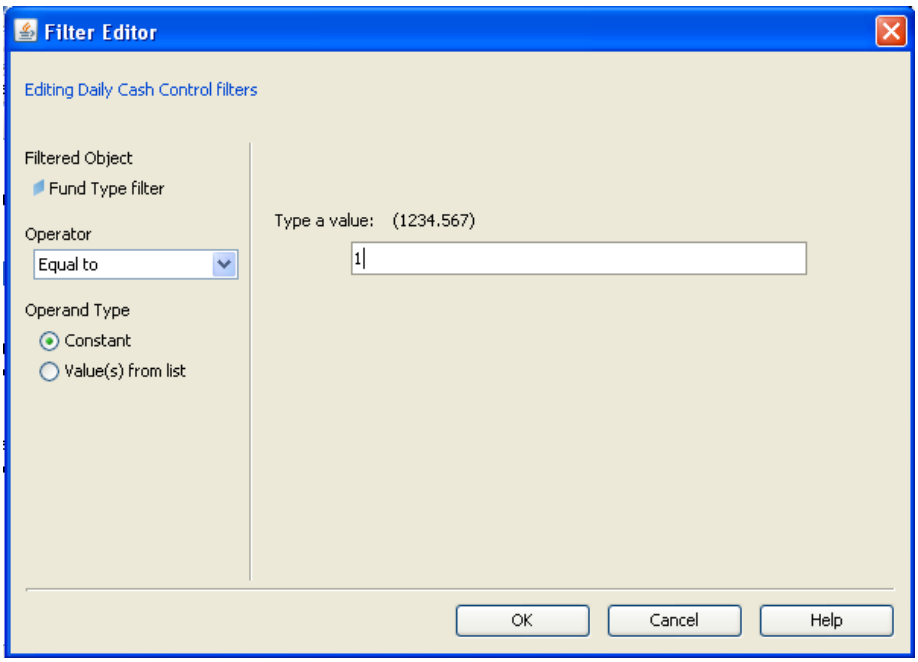
Using a Filter Variable

A third way to create a filter is to define a variable identifying the filter condition. For example, suppose you have a report that includes all Fund Types on one report tab, and you want a second report tab showing only Fund Type = 1300. You would define a filter variable as follows:

Fund Type filter = [Fund Type] =“1300”

A filter variable should always be a condition that evaluates as TRUE (=1) or FALSE (=0). The **Fund Type filter** variable will only evaluate as TRUE (=1) when the value of the [Fund Type] data object is 1300. Thus a block having this variable applied as a filter will only display results where [Fund Type] = 1300.

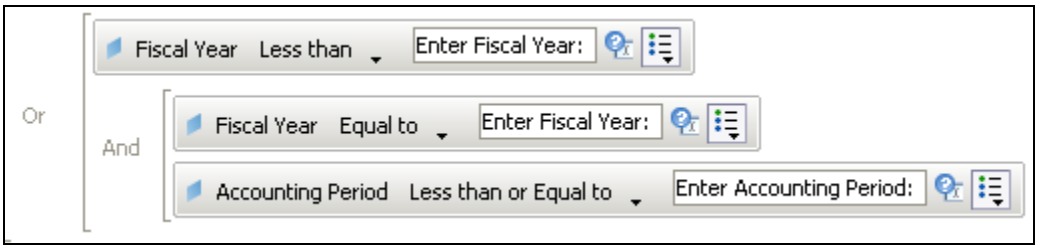
Once the filter variable has been defined, it is applied using the Filter Panel. The operator should be “Equal To” and the value should be 1 (TRUE), as shown.



This is the most complex form of filter in that you can identify any condition as part of your filter variable.

Example: Filter for Current Period tab in ITD report

Suppose you had a report with two report tabs: “Inception to Date” and “Current Period”. Your query filters would have to include something like the following in order to populate the Inception to Date tab:



On your Current Period tab, you could copy the Inception to Date report, then filter for the current accounting period by creating a filter variable as follows:

Current Period filter = ([Fiscal Year]=ToNumber(UserResponse(“Enter Fiscal Year:”))) AND ([Accounting Period]=ToNumber(UserResponse(“Enter Accounting Period:”)))

Once the filter variable is created, apply it by dragging it into the Filter Pane as previously shown.

Example: Filter for Current Period Activity in Balance report

Suppose you were creating a budget report which displayed budget award as well as encumbrance, expenditure and revenue activity as shown.

Commonwealth of Kentucky
eMARS Financial System
Monthly Program Listing

Page: 1 of 24
Run Date: 1/26/10
Run Time: 7:56:45 PM

AWARDED	PRE-ENCUMB	ENCUMB	TOTAL EXP	TOTAL REV	REV - EXP	AWD - REV	AWD - EXP
100,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00
100,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00
100,000.00	0.00	0.00	1,063.12	0.00	(1,063.12)	100,000.00	98,936.88
100,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00
100,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00
100,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00
100,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00
100,000.00	0.00	0.00	837.84	0.00	(837.84)	100,000.00	99,162.16
100,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00
100,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00
100,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00

There are several lines on this report for which there was no activity in the specified accounting period. These lines can be excluded by defining a variable as follows:

Activity =Abs([Pre-Encumbrance])+Abs([Encumbrance])+
Abs([Total Expenditures])+Abs([Total Revenue])+0

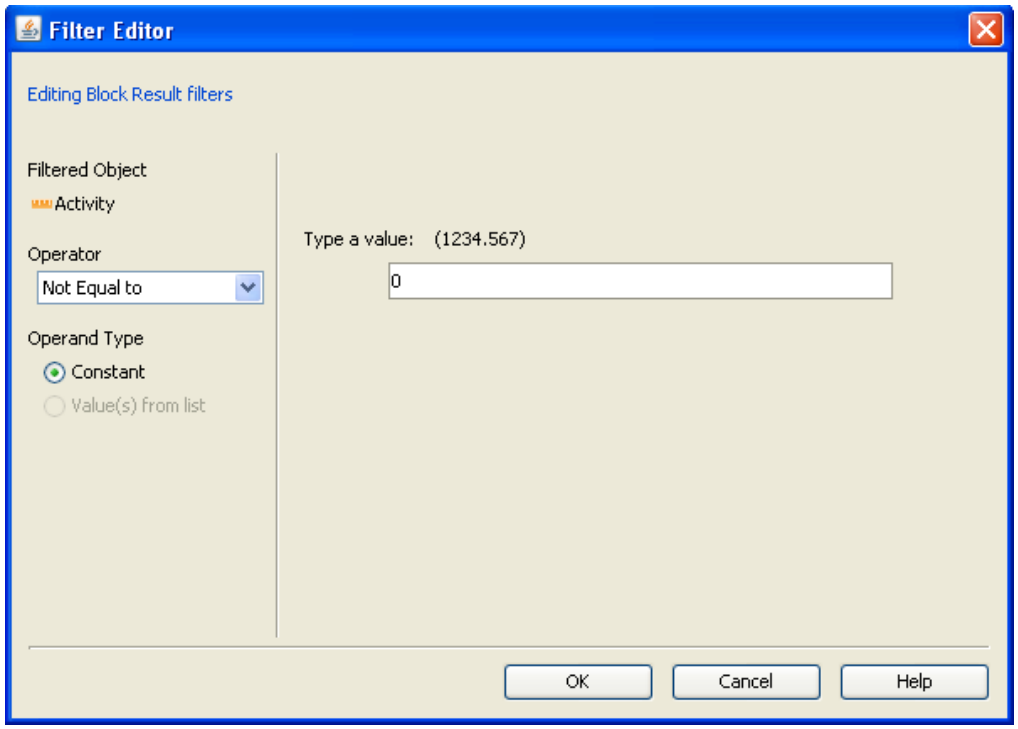
Notice two things about this variable. First, it is the sum of the absolute value of each column. This is important, because the values may be positive or negative and therefore may offset one another, making it appear that there was no activity when there actually was. Second, notice the "+0" on the end of the formula for the variable. This is important because it is possible for all of the column values to return a NULL result. By adding zero to the total, it converts a NULL total to 0.00. This way **Activity** will always calculate a positive amount if there was activity in the current period, and 0.00 if there was not.

There are two ways this filter can be applied. You could create a filter variable previously suggested:

Activity filter = ([Activity]<>0)

This filter would be applied as described in the complex filters section.

Alternatively, you can save yourself a step by establishing a filter as follows:



In either case, the result is a cleaner report showing only those accounts having activity in the current period.

Commonwealth of Kentucky
eMARS Financial System
Monthly Program Listing

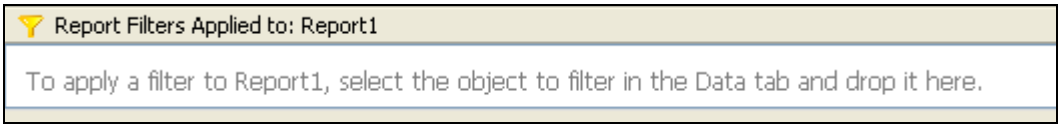
Page: 1 of 4
Run Date: 1/26/10
Run Time: 7:56:45 PM

AWARDED	PRE-ENCUMB	ENCUMB	TOTAL EXP	TOTAL REV	REV - EXP	AWD - REV	AWD - EXP
100,000.00	0.00	0.00	1,063.12	0.00	(1,063.12)	100,000.00	98,936.88
100,000.00	0.00	0.00	837.84	0.00	(837.84)	100,000.00	99,162.16
234,160.00	0.00	599.49	0.00	0.00	0.00	234,160.00	234,160.00
121,015.00	0.00	0.00	0.00	335.96	335.96	121,350.96	121,015.00
93,389.00	0.00	24,277.00	0.00	0.00	0.00	93,389.00	93,389.00
164,958.37	0.00	121,242.37	0.00	0.00	0.00	164,958.37	164,958.37
975,513.29	0.00	0.00	22,295.29	(16,061.17)	(6,234.12)	959,452.12	953,218.00
100,000.00	0.00	0.00	1,073.97	0.00	(1,073.97)	100,000.00	98,926.03
53,833.02	0.00	0.00	3,985.63	(0.00)	(3,985.63)	53,833.02	49,847.39
150,000.00	0.00	0.00	496.09	0.00	(496.09)	150,000.00	149,503.91
575,505.31	0.00	0.00	75,515.75	0.00	(75,515.75)	575,505.31	499,989.56

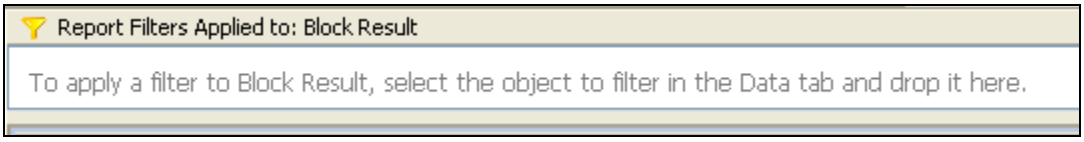
Note: In order for this filter to work, it must be applied to the Block (i.e., to the table) and not to the entire report. Applying filters to a Block is described in the next section.

Applying Filters to Parts of a Report

There are times when applying a filter to the entire report is not desirable. In the last example, the only way the filter would work is to apply it only to the table and not to the report as a whole. Here is the way the Filters Pane appears when you are applying a filter to the entire report:

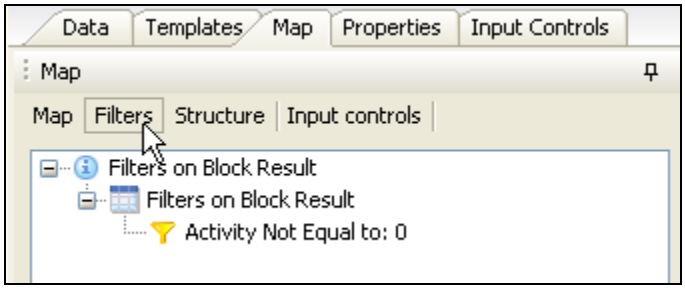


To apply a filter to a table, click on the border of the table to select it. You will see the prompt in the Filters Pane change accordingly.

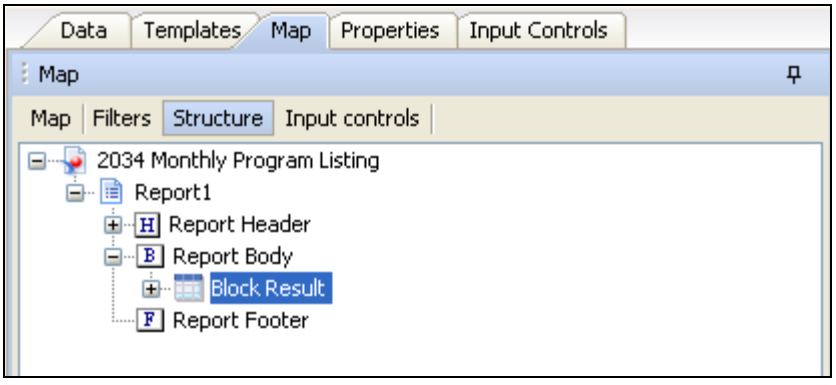


The prompt in the Filter Pane indicates the part of the report to which the filter will be applied when you create it. You can apply filters to blocks, cells, sections, or any other part of the report.

Another way to determine whether filters have been applied to a report is to use the **Map** tab on the left side of the screen. Select **Map**, then select **Filters**. A list of any filters applied to the selected part of the report will be displayed.



If you have difficulty selecting the part of the report to which you want to apply a filter, simply choose **Structure** (to the right of **Filters**) and then click on the corresponding part.



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Appendix A – Sample Report Documentation

Title:	2540S Allotment Summary
Category:	Statewide Monthly Reports > Allotment Reports
Purpose:	Provides users with a summary of all transactions hitting allotment for a particular Department and Accounting Period. Includes allotment balance.
Type:	Business Objects Thick Client
Creation Date:	03/04/2008 (last published 10/05/2009
Created By:	PVJ0046
Documented By:	Diana Holberg
Change Log Last Update Date:	10/5/2009

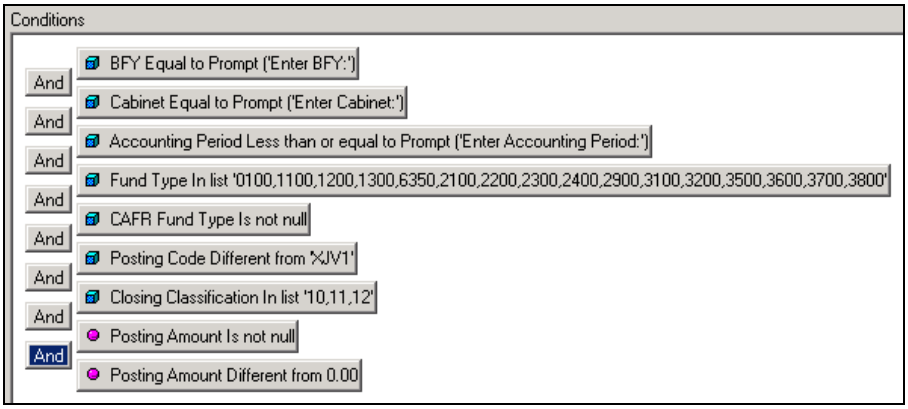
Universe(s): General Accounting Universe
Budget Execution Universe – KY Universe

Number of Queries: 2 (*Query 1 with GA, Query 2 with BE_KY*)

Selection Criteria:

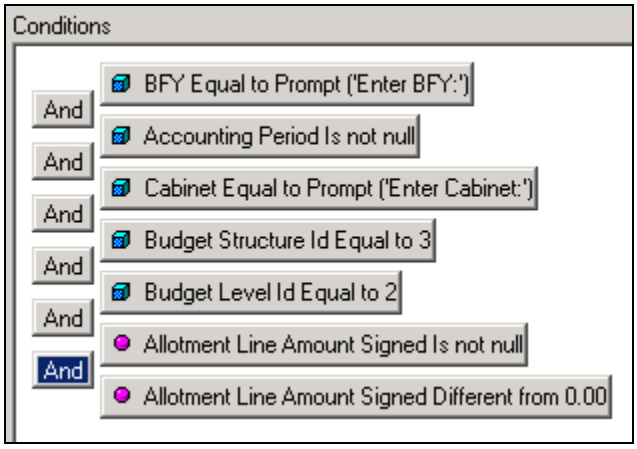
Query 1 with GA

BFY is equal to the BFY input by the user
AND
Cabinet is equal to the cabinet input by the user
AND
Accounting Period is less than or equal to the accounting period input by the user
AND
Fund Type is equal to 0100, 1100, 1200, 1300, 6350, 2100, 2200, 2300, 2400, 2900, 3100, 3200, 3500, 3600, 3700 or 3800
AND
CAFR Fund Type is not null
AND
Posting code is not equal to XJV1
AND
Closing Classification is equal to 10, 11 or 12
AND
Posting Amount is not null
AND
Posting Amount is not equal to 0.00



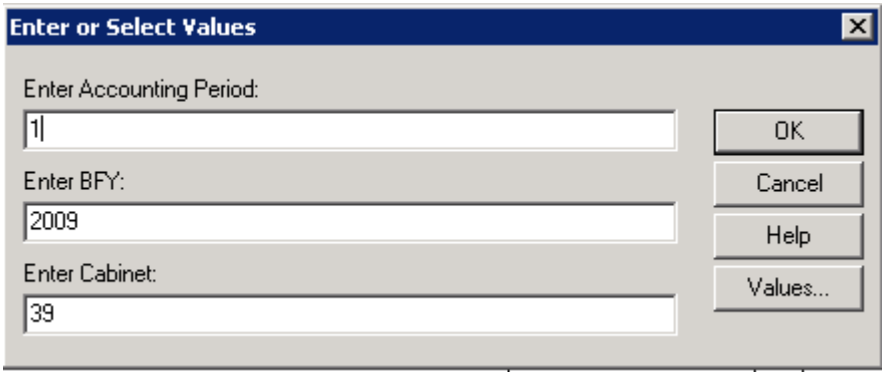
Query 2 with BE_KY

BFY is equal to the BFY input by the user
AND
Accounting Period is not null
AND
Cabinet is equal to the cabinet input by the user
AND
Budget Structure ID is equal to 3
AND
Budget Level ID is equal to 2
AND
Allotment Line Amount Signed is not null
AND
Allotment Line Amount Signed is not equal 0.00



Prompts:

1. **Enter Accounting Period**
2. **Enter BFY**
3. **Select Cabinet**

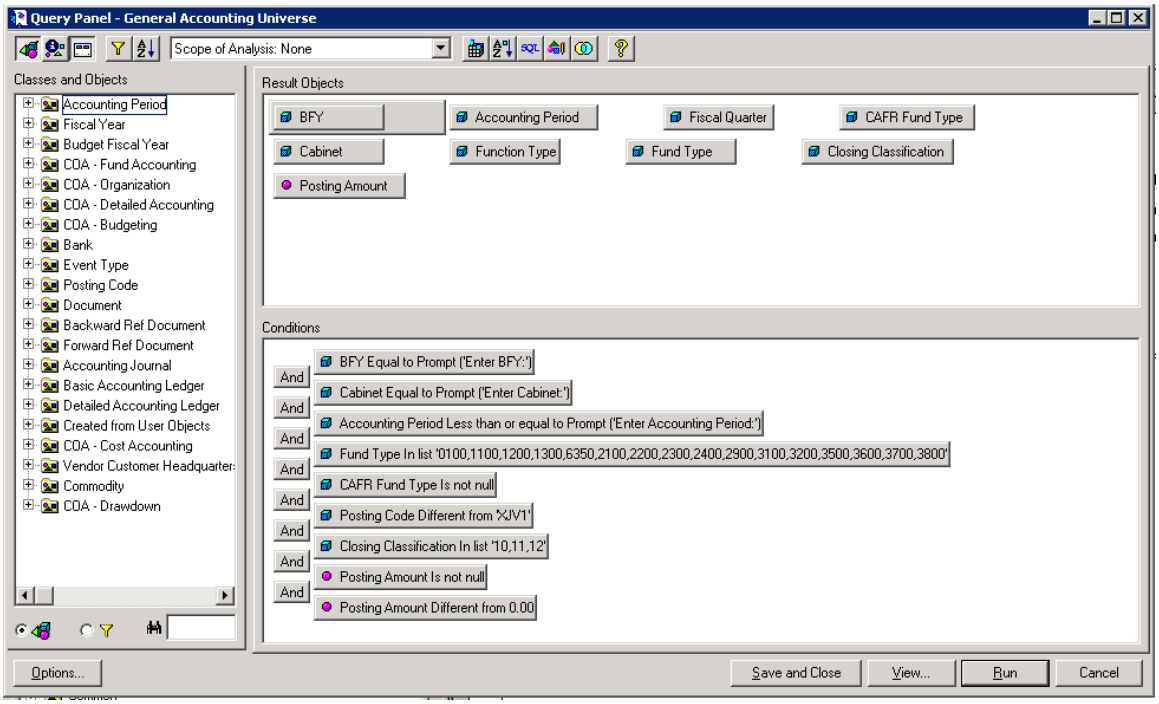


SQL:

Query 1 with GA

```
SELECT
  DIM_BFY.FY,
  DIM_APD.PER,
  DIM_APD.FQTR,
  DIM_FUND.CAFRFTYP_CD,
  DIM_ORG.CAB_CD,
  DIM_FUNC.FNTYP_CD,
  DIM_FUND.FTYP_CD,
  DIM_PSCD.PSCD_CLOS_CL_CD,
   SMRY_LDGRB.PSTNG_AM
FROM
  DIM_BFY INNER JOIN SMRY_LDGRB ON (DIM_BFY.BFY_ID=SMRY_LDGRB.BFY_ID)
   INNER JOIN DIM_APD ON (DIM_APD.APD_ID=SMRY_LDGRB.APD_ID)
   INNER JOIN DIM_FUND ON (DIM_FUND.FUND_ID=SMRY_LDGRB.FUND_ID)
   LEFT OUTER JOIN DIM_FUNC ON (SMRY_LDGRB.FUNC_ID=DIM_FUNC.FUNC_ID)
   LEFT OUTER JOIN DIM_ORG ON (DIM_ORG.ORG_ID=SMRY_LDGRB.ORG_ID)
   INNER JOIN DIM_PSCD ON (DIM_PSCD.PSCD_ID=SMRY_LDGRB.PSCD_ID)

WHERE
  (( @Variable('BOUSER') IN (SELECT USID FROM INFO_SEC_ALL WHERE USID =
@Variable('BOUSER')) OR SMRY_LDGRB.ORG_ID IN (SELECT DIM_ORG.ORG_ID
FROM INFO_SEC, DIM_ORG WHERE DIM_ORG.DEPT_CD = INFO_SEC.DEPT_CD
AND USID = @Variable('BOUSER')) OR SMRY_LDGRB.ORG_ID IS NULL ))
  AND  (
  DIM_BFY.FY  =  @variable('Enter BFY:')
  AND  DIM_ORG.CAB_CD  =  @variable('Enter Cabinet:')
  AND  DIM_APD.PER  <=  @variable('Enter Accounting Period:')
  AND  DIM_FUND.FTYP_CD  IN  ('0100', '1100', '1200', '1300', '6350', '2100', '2200',
'2300', '2400', '2900', '3100', '3200', '3500', '3600', '3700', '3800')
  AND  DIM_FUND.CAFRFTYP_CD  IS NOT NULL
  AND  DIM_PSCD.PSCD_CD  !=  'XJV1'
  AND  DIM_PSCD.PSCD_CLOS_CL_CD  IN  ('10', '11', '12')
  AND   SMRY_LDGRB.PSTNG_AM  IS NOT NULL
  AND   SMRY_LDGRB.PSTNG_AM  !=  0.00
  )
```

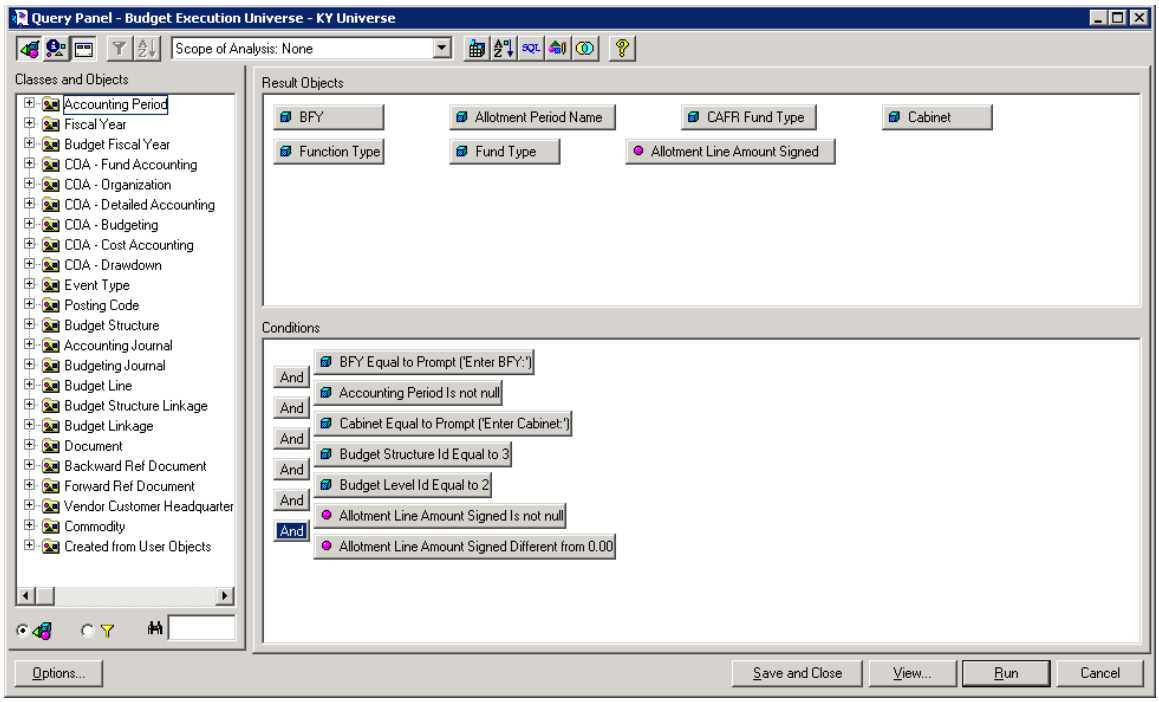


Query 2 with BE_KY

```
SELECT
  DIM_BFY.FY,
  CASE DIM_BUDS.ALOT_PER WHEN 1 THEN 'First' WHEN 2 THEN 'Second' WHEN 3
THEN 'Third' WHEN 4 THEN 'Fourth' WHEN 5 THEN 'Fourth' END,
  DIM_FUND_CAFRFTYP_BUD.CAFRFTYP_CD,
  DIM_ORG_CAB_BUD.CAB_CD,
  DIM_FUNC_TYP_BUD.FNTYP_CD,
  DIM_FUND_TYP_BUD.FTYP_CD,
  case when ( FACT_BUDJ.ALOT_INCR_DCRS_IND )  = 'Decrease' then (
FACT_BUDJ.ALOT_LN_AM ) * (-1) else ( FACT_BUDJ.ALOT_LN_AM ) end
FROM
  DIM_BFY INNER JOIN FACT_BUDJ ON (FACT_BUDJ.BFY_ID=DIM_BFY.BFY_ID)
   INNER JOIN DIM_BUDS ON
(FACT_BUDJ.BUD_STRU_ID=DIM_BUDS.BUD_STRU_ID)
   LEFT OUTER JOIN ( SELECT UNIQUE(CAB_CD) AS CAB_CD, FY, CAB_NM,
CAB_SH_NM, DW_ST FROM DIM_ORG) DIM_ORG_CAB_BUD ON
(DIM_ORG_CAB_BUD.CAB_CD=DIM_BUDS.CAB_CD AND DIM_ORG_CAB_BUD.FY =
DIM_BUDS.BFY AND DIM_ORG_CAB_BUD.DW_ST=1)
   LEFT OUTER JOIN ( SELECT UNIQUE(FTYP_CD) AS FTYP_CD, FY, FTYP_NM,
FTYP_SH_NM, DW_ST FROM DIM_FUND) DIM_FUND_TYP_BUD ON
(DIM_FUND_TYP_BUD.FTYP_CD=DIM_BUDS.FTYP_CD AND
DIM_FUND_TYP_BUD.FY = DIM_BUDS.BFY AND DIM_FUND_TYP_BUD.DW_ST=1)
   LEFT OUTER JOIN ( SELECT UNIQUE(CAFRFTYP_CD) AS CAFRFTYP_CD,
CAFRFTYP_NM, CAFRFTYP_SH_NM, FY, DW_ST FROM DIM_FUND)
DIM_FUND_CAFRFTYP_BUD ON
```

```
(DIM_FUND_CAFRFTYP_BUD.CAFRFTYP_CD=DIM_BUDS.CAFRFTYP_CD AND
DIM_FUND_CAFRFTYP_BUD.FY = DIM_BUDS.BFY AND
DIM_FUND_CAFRFTYP_BUD.DW_ST=1)
  LEFT OUTER JOIN ( SELECT UNIQUE(FNTYP_CD) AS FNTYP_CD, FNTYP_NM,
FNTYP_SH_NM, FY, DW_ST FROM DIM_FUNC) DIM_FUNC_TYP_BUD ON
(DIM_FUNC_TYP_BUD.FNTYP_CD=DIM_BUDS.FNTYP_CD AND
DIM_FUNC_TYP_BUD.FY = DIM_BUDS.BFY AND DIM_FUNC_TYP_BUD.DW_ST=1)
  LEFT OUTER JOIN DIM_APD ON (FACT_BUDJ.PER_ID=DIM_APD.APD_ID)

WHERE
 (
 DIM_BFY.FY  =  @variable('Enter BFY:')
 AND  DIM_APD.PER  IS NOT NULL
 AND  DIM_ORG_CAB_BUD.CAB_CD  =  @variable('Enter Cabinet:')
 AND  DIM_BUDS.STRU_ID  =  3
 AND  DIM_BUDS.LVL_ID  =  2
 AND  case when ( FACT_BUDJ.ALOT_INCR_DCRS_IND )  = 'Decrease' then (
FACT_BUDJ.ALOT_LN_AM ) * (-1) else ( FACT_BUDJ.ALOT_LN_AM ) end  IS NOT
NULL
 AND  case when ( FACT_BUDJ.ALOT_INCR_DCRS_IND )  = 'Decrease' then (
FACT_BUDJ.ALOT_LN_AM ) * (-1) else ( FACT_BUDJ.ALOT_LN_AM ) end  !=  0.00
 )
```



Report Filters:

Table 1

= Not IsNull(<Accounting Period>)

Formulas:

Query 1 with GA:

=<CAFR Fund Type(Query 1 with GA)>&<Function Type(Query 1 with GA)>&<Fund Type(Query 1 with GA)>
=0-Sum(<EncumCurrPer>)-Sum(<ExpCurrPeriod>)
=Sum(<Encumbrance>)
=Sum(<EncumCurrPer>)
=Sum(<ExpCurrPeriod>)
=Sum(<Expenditure>)
=Sum(<Posting Amount>)
=Sum(<Total Enc>)
=Sum(<Total Exp>)
=Sum(If <Accounting Period)> < ToNumber(UserResponse (“Query 1 with GA” , “Enter Accounting Period:”))
Then <Posting Amount>
Else 0)

Query 2 with BE_KY:

=Sum(<Allotment Line Amount Signed<)
=Sum(<GetMaxAllotment>)

Common

=<GetMaxAllotmentByPeriod>-<Encumbrance>-<Expenditure>
=Sum(<GetMaxAllotmentByPeriod>)-Sum(<Encumbrance>)-Sum(<Expenditure>)
=Sum(<GetMaxAllotmentByPeriod>)-Sum(<Total Enc>)-Sum(<Total Exp>)
=Sum(<GetMaxAllotmentByPeriod>)-<Encumbrance>-<Expenditure>)
=Sum(<GetMaxAllotmentByPeriod>-<EncumCurrPer>-<ExpCurrPeriod>)
=Sum(If <Accounting Period> < ToNumber(UserResponse (“Query 1 with GA” , “Enter Accounting Period:”))
Then <Allotment Line Amount Signed>
Else 0)

Variables:

Query 1 with GA:

section =<CAFR Fund Type(Query 1 with GA)>&
<Function Type(Query 1 with GA)>&
<Fund Type(Query 1 with GA)>

Encumbrance flag =If(<Closing Classification>="12" And
<Accounting Period><ToNumber(UserResponse ("Query 1 with GA" , "Enter Accounting Period:")))
Then “Yes”
Else “No”

Encumbrance =<Posting Amount> Where (<Encumbrance flag>=”Yes”)

EncumCurrPer flag =If(<Closing Classification>="12" And
<Accounting Period>=ToNumber(UserResponse ("Query 1 with GA" , "Enter Accounting Period:")))
Then “Yes”
Else “No”

EncumCurrPer = <Posting Amount> Where (<EncumCurrPer flag>=”Yes”)

ExpCurrPeriod flag =If((<Closing Classification>="10" Or
<Closing Classification>="11") And
<Accounting Period>=ToNumber(UserResponse ("Query 1 with GA" , "Enter Accounting Period:")))
Then “Yes”
Else “No”

ExpCurrPeriod =<Posting Amount> Where (<ExpCurrPeriod flag>=”Yes”)

Expenditure flag =If((<Closing Classification>="10" Or
<Closing Classification>="11") And
<Accounting Period><ToNumber(UserResponse ("Query 1 with GA" , "Enter Accounting Period:")))
Then “Yes”
Else “No”

Expenditure =<Posting Amount> Where (<Expenditure flag>=”Yes”)

Total Enc =If(<Closing Classification>="12")
Then “Yes”
Else “No”

Total Enc =<Posting Amount> Where (<Total Enc>=”Yes”)

Total Exp flag =If(<Closing Classification>="10" Or
<Closing Classification>="11")
Then “Yes”
Else “No”

Total Exp =<Posting Amount> Where (<Total Exp flag>=”Yes”)

Query 2 with BE_KY:

GetMaxAllotmentByPeriod =Max(<Allotment Line Amount Signed>)

Joins:

Query 1 with GA ⇔ Query 2 with BE_KY

BFY ⇔ BFY
Fiscal Quarter ⇔ Allotment Period Name
CAFR Fund Type ⇔ CAFR Fund Type
Cabinet ⇔ Cabinet
Function Type ⇔ Function Type
Fund Type ⇔ Fund Type

Special Considerations:

None

Sort Order:

Report1

Table 1 Sorted by *CAFR Fund Type*
and then by *Function Type*
and then by *Fund Type*

Sample:

Report1

Report Id: 2540S
Run Date: 12/24/2008
BFY:
APD:
Cabinet:

Commonwealth of Kentucky
eMARS Financial System
Monthly Allotment Summary

Page: 1 of 7
Run Time: 10:08:49

CAFR Fund Type	Function Type	Fund Type		Allotment	Encumbrance	Expenditure	Allotment Balance
FDRL	079A	1200	Beginning Balance	400,000.00	0.00	0.00	400,000.00
			Monthly Balance	0.00	0.00	0.00	0.00
			Ending Balance	400,000.00	25,000.00	0.00	375,000.00
FDRL	758B	1200	Beginning Balance	2,400,000.00	0.00	0.00	2,400,000.00
			Monthly Balance	0.00	0.00	0.00	0.00
			Ending Balance	2,400,000.00	0.00	1,330,177.00	1,069,823.00
GNRL	130A	0100	Beginning Balance	7,636,600.00	0.00	0.00	7,636,600.00
			Monthly Balance	0.00	0.00	0.00	0.00
			Ending Balance	7,636,600.00	649,530.09	642,076.42	6,344,993.49
GNRL	130B	0100	Beginning Balance	1,589,900.00	0.00	0.00	1,589,900.00
			Monthly Balance	0.00	0.00	0.00	0.00
			Ending Balance	1,589,900.00	0.00	512,801.96	1,077,098.04
GNRL	130D	0100	Beginning Balance	5,113,900.00	0.00	0.00	5,113,900.00
			Monthly Balance	0.00	0.00	0.00	0.00
			Ending Balance	5,113,900.00	4,999.00	1,589,538.82	3,519,362.18
GNRL	130E	0100	Beginning Balance	2,846,300.00	0.00	0.00	2,846,300.00
			Monthly Balance	0.00	0.00	0.00	0.00
			Ending Balance	2,846,300.00	0.00	937,077.74	1,909,222.26
GNRL	130F	0100	Beginning Balance	1,136,100.00	0.00	0.00	1,136,100.00
			Monthly Balance	0.00	0.00	0.00	0.00
			Ending Balance	1,136,100.00	0.00	385,580.34	750,519.66

Appendix B – Sample Report Template

Commonwealth of Kentucky
eMARS Financial System
Monthly Cash Balance

Page: 1 of 1
Run Date: 1/18/2010
Run Time: 2:17:43 PM

Report ID: 2110
Department: 079 Cabinet:
FY: 2008
APD: 11

Fund Type	Department	Fund	Fund Name	Cash
				0.00

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Appendix C – Sample Quality Assurance Checklist

1. Tabs
   - ☐ All tabs are present and display the correct report
   - ☐ Tabs are named to reflect purpose of the report (< 31 characters for Excel limitation)
   - ☐ An "Export to Excel" tab is included which displays data in a single table
2. Formatting
   - ☐ Page layout is appropriate (portrait or landscape; Letter,Legal, or Tabloid for Export tab)
   - ☐ Page margins are between 0.25" and 0.51"
   - ☐ Report title is centered, Arial 12pt bold
   - ☐ Report title has as first two lines:

     Commonwealth of Kentucky
     eMARS Financial System

   - ☐ Left side displays ***correct*** report ID and parameters for report, Arial 10pt bold
   - ☐ Right side displays page number (1 of x), Run Date and Run Time, Arial 10pt bold
   - ☐ Column headings are aligned with table, Arial 9pt bold, underlined
   - ☐ Column text is Arial 9pt (or an appropriate size)
   - ☐ Columns fit on page and appropriate page layout (portrait, landscape) is used
   - ☐ Amount fields are formatted #,##0.00;(#,##0.00);0.00;0.00 (no dollar signs; two decimal places; zero filled, parentheses used to indicate negative amounts)
   - ☐ Totals are Arial 9pt bold
   - ☐ Date fields are formatted mm/dd/yyyy
   - ☐ No codes/words are cut off midstream
3. Data
   - ☐ Run for one parameter (e.g., Dept 758, APD 1, FY 2009) yields same results (columns and totals) as Production
   - ☐ Run for second parameter (e.g., Dept 721, APD 2, FY 2010) yields same results (columns and totals) as Production
   - ☐ Report title is displayed correctly (e.g., with correct Department name)
   - ☐ Parameters are displayed correctly in report header
   - ☐ Page numbers, run date and run time are displayed correctly in report header
4. Save options
   - ☐ Report data is purged before the report is saved
   - ☐ Report is "saved for all users"
   - ☐ Report is saved ***without*** "refresh on open"